EUNICOBOL COMPUTERVO C

Thursday, April 29, 1982



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2080 Series

Thursday, May 6, 1982 Number 807 30p

IBM to give preferential treatment to 3081 users

More delay

on IBM's big

'82. A great year for PT7. THE ADVANCED ILATURE TERMINAL TOR ICLAND BAL FERRANTI Computer System:

Burroughs, NCR defy depressed US market

uonal exchanges continues to de-press the financial performance of strength of the dollar. Domestic 44.3% rise in sales for the first the American computer industry, though one or two companies are

going against the trend.
The majority of US-based mainframe manufacturers have now resevere financial straits, showed the most hope with sales up 31% at just under \$990,100,000, and profit before tax of just over \$43.7 so the company's performance was million, an increase of 11%.

Nct profit fared better, up 22% at \$27.1 million, but this reflects a lower tax charge due to last year's

NCR reports first quarter net are also likely to fall below 1981," profits of \$30.63 millioo, up 11% he said. over the same period last year. Sales rose by 3% to \$754.6 million.

so the company's performance was STC's profit margin is consider-well down on the same period in ably healthier than CDC's. STC

On the periphersis side there are nual growth rates, continue to conflicting tales from Control Data show spectacular gains, but there are signs that growth is fistening

Company	Sales	Change	Net Profit	Change
IBM	\$7.07bn	9.4%	\$768.0M	5.2%
Burroughs	\$990.1M	31%	\$27.1M	22%
NCR	\$754.6M	3%	\$30.63M	11%
Honcywell	\$1.261bn	4%	\$55.5M	2%

Comparative first quorter results.

Sales outside the US dropped by (CDC) and Storage Technology 4%, ssys NCR chairman William (STC). STC continues in its path

sales were up 11%.

Honeywell saw its net profit inquarter at \$262.4 million, pre-tax
profits up 55.7% at \$28.8 million crease by 2% in the first quarter to \$55.5 million, against an inflation rate of between 2% and 2.5% for with the same quarter in 1981. ported their first quarter figures.

Of these Burroughs, so recently in of \$36.6 million from the sale of slip almost 33% to \$31.1 million, Honeywell's share in the service on sales up just under 10% to bureau Geisco to General Electric, \$791.7 million.

The outlook is blesk, secording to Honeywell's chairman Edson Spencer, "Second quarter earnings

lange	Net Profit	Change	out.
.4% L% % %	\$768.0M \$27.1M \$30.63M \$55.5M	5.2% 22% 11% 2%	Apple reported first quarter sales up 66% to \$131 million, with profits rising 51% to \$13.8 million, compared to first quarter 1981. Wang saw its third quarter sales
			rise by 40.2% ro \$297.6, while

CIS Cobol for IBM **Personal**

by Maggie McLening UK SOFTWARE book Va Focus has signed an appearant with IBM to provide applicate development tools for the IM Personal Computer, in the U.S. in

Micro Focus has announced to CIS Cobol, its Ansi '74 snat! version of Cobol for microncy ers, is to be implemented at R. IBM machine in May this to running under the standard O'E. 86 operating system.
Other Micro Focus products

to follow shortly, such a Leel Cobol, the mainframe compete Cobol compiler, and Formali: screen formatter and source at

ing tool Cobol Animater, what ows a programmer to with a real-time execution of Cale ource code, will also be availa Micro Focus sees the additat

these development toda at T ficant addition to the IBM is atlantic capacity for computer data, telex messages, and telephone calls tion of Cobol Animator and Les will be boosted by more than 50% with the installation of a 3295 nautical mile long cable to link Europe, the US and Canada. British Telecom crews are shawn landing the UK end. Total cost will be £100 million, with £30 million to be spent in the UK with Standard Telephone and Cables. II Cobol turns the IBM PC atte maintaining Cobol progressays Peter Hewitt, the company marketing manager.
First distributor of the

package in the UK is E Microcomputerland, the wholesale branch of Geman velopments in Farnboough E is not selling its Personal Con-ter in the UK yet, but Micro puterland is importing it -

series, Commodore has brought from the US.
Cobol Animstor, Level IICA out s 500 series, incorporating the oems, and will be should twin processor features of the 700 but without the in-built disc drives



ICL lands £20m major orders

by Kevin Cahlil

ICL picked up two huge orders this week and at the same time announced significant enhancements to the existing mid-range

One of the orders stands among he biggest ever won by ICL overis worth an estimated \$20 midlion for a delivery to the Empo-midlion for a delivery to the Empo-num Holding Group in Singspore. The Emporium Holding Group is the parent of one of South-East Jain's largest shop trading groups, with sites in Singapore, Hoog Kong, Malaysia, Brunei and Kuching.

Authing.

ICL will initially deliver 2

computer 25 computer

the order is extremely significant con the East Asia, which is one of der £40,000. the fastest growing computer mar-kett in the world.

INSIDE THIS WEEK'S ISSUE

Osborne leaps on third party bandwagon.......7

Lurid visions of the micro society...............20

worth £10 million in total, will improve ICL's commitment to and standing in the banking world.

BACS, which is operated jointly by the five main UK clearing banks, already has six large ICL 1900 and 2900 machines.

The new project, centred around the recently installed ICL 2966 at Dunstable, will involve a real time service based on s series of ICL DRS 20 terminals connected to the 2966.

Nuching.

ICL will initially deliver 2
ME29s, 28 System 25 computer

Systems, and 350 9512 point of sale terminals. The sale was made in the face of inteose local compaction. the face of inteose local competi-tion from a range of US and Japa-be supplied, complete with three nese computer companies and quarters Mbyte of main memory, Doug Comish, ICL's director of two 35 Mbyte disc drives, a mainternational marketing, says that ications coupler, for un-

The second major order is for hardware said software to support the Banks Automated Clearing System (BACS) electronics fund transfer project.

Peter Bonfield, ICL's marketing operations director, says that the system are due in November 1982. The new hardware will come with

disc drive have experienced with the 3081 D. 1BM's Montpellier plant, where Eurupean 3081s are being inside has an annual capacity for 1,000 systems. If 3081 users are to get priority on 3380 deliveries, it is clear that there will not be many of sunounced a product for this mar-

in Europe this summer, but it in-tends to give preferential treat-ment to users of its big 3081 estimated 4,000 3380s available for smaller machines. machines at the expense of smaller Both STC and Memorex have IBM originally intended to

Europe in the first year of availability. This has now been reduced to about 4,000 following manufacturing difficulties. This means that 3380s could still be in short supply, especially since IBM is to give priority to the 3081.

Martin Ginger, European marketing manager for disc systems at

Technology, says that

supply about 15,000 3380 units in

MANY IBM sites will remain starved of the lung-overdue 3380

disc drive when deliveries start

IBM intends to start delivering

IBM has dropped its sequential purchasing policy on 3380s, to make them available to 3081 users. Abe Hasson, peripherals mar-keting director at National Advanced Systems, says IBM is giving 3081 users "preferential allocations" of 3380s, provided they can justify the need for large

This should not be difficult for many 3081 users following the perfar only STC has announced an actual product. Mike Kitching, Memorex UK msnsging director said that Memorex expects to aunnunce its product plans soon, with the intention of commencing deliveries before 1983. The other company which has

ket is Ibis, which unveiled its Ibis 5000 in March. Ibis was formed by a group of ex-Memorex and exannuaced the intention of supplying 3380 type products, though so STC people, and STC has issued a

writ against Ibis alleging patent infringements. Ibis had hoped to start shipping the five-gigabyte Ibis 5000 system towards the middle of 1983. It now looks as though it could be delayed. Mesnwhile IBM is already shipping 3370 and 3375 dise systems to the UK. The 3370 is aimed at DOS/VSE systems while the 3375 is an intermediate system between the 3350 and 3380 for large installations. Both use the

same thin film read/write hesd technology employed in the 3380, both ran into the same problems. The main problems were chlorine contamination of the sealed disc unit, sad secondly, especially on 3370s, a proliferation of head crashes after the discs had been re-GINGER . . . IBM has dropped

NEWS BRIEF

Standalone micro soon from DEC

THE long-awaited standalone microcomputer from mini manu-fecturer DEC is nearly here. Units were on private show to selected customers at last month's Hanaver Pair and the machine is to have its worldwide launch on May 10. DEC already has au entry into the personal computer market, increasingly important to mini and mainfraine companies, with its single board appraile which converts the VI'100 terminal into

Fund pays out

MICROCOMPUTER suftware house Systematics is the first contpany to henefit from the estab-lishment of the £10 million Al³A Venture Capital Fund by US investment managers Alan Patricol Associates. The fund has now been fully subscribed by 20 investors including Citibank and Honeywell Pension Trustees, and its objective is to invest in high growth UK

Business system

SEMICONDUCTOR house Intel has introduced a general-purpose commercial system for business supply the transaction processing system (TPS) as a building block for system builders.

Taking control

MEMOREX is taking control of all disc production at Burroughs Memorex will control Burroughs disc plants and will make its pro-ducts available to Burroughs, thus giving Burroughs users access to high capacity Mcmorex 3652 type discs for the first time. Burroughs acquired Memorex last year.

'Bring R&D North' STRONG incentives will be First phase of the SDA's placed before high technology strategy for electronics industry

clectronics companies to enand development facilities in Scot-land. Following a review of its electronies support strategy by management consultants Booz Allen and Hamilton, the Scottish Development Agency (SDA) is to shift emphasis sway from financial ncentives and concentrate on the niversity-related research capasility the region can offer.

support has been successful. Over 5,500 jobs have been created since 1979 by the expansion of existing multi-nationals and home-grown

In addition about 25 new in Scotland since the SDA launched its electronics strategy. In the light of the report, the SDA will be mobilising university-based research capabilities.

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codes

Commodore takes 16-bit challenge served by the IBM Personal Com- operating system software or appli-

world for the first time, Commodore has unveiled a machine to take on the 16-bit IBM Personal Computer. At the same time it has released eight-bit machines which will undereut mass market rivals like Apple and Tandy and hot up price competition lower down in

returns just under 11% on sales.

before tax, while CDC can only

manage 3.9%.
Apple Computer and Wang

Laboratories, both darlings of

Wall Street for their massive an-

the microcomputer market. The basic version of its new top end micro, due here in September and costing about £1,600, is pitted against the Apple III. Called the Commodore 720, it weighs in with 256K RAM expandable to over 750K. That compares with Apple's soon to be introduced 256K maximum version. The 720 has twin built-in floppy drives interfaced to the main board using

irect memory access for speed. But it is the split bus arehitec-ture of the 720 that opens up new areas for Commodore. As well as the cight bit 6509 processor - a development of the 6502 processor that powers Apples, Pets and various other personal computers - there is a slot for s second processor board to be installed.

tions while the second processor looks after running the application

By plugging in a board carrying an 8088 processor, the 720 moves up into the pseudo 16-bit market Commodore 720.

puter and the Sirius 1. Commodore itself will be selling an 8088 vercartridges found on games sion of the 720 for under £2,000, says UK general manager Bob

Plugging other processors in the second slot will give access to additional operating systems and programming languages. A Z80 board will open up CP/M software to 720 users - in a similar way to the CP/Maker board for current Pct

take plug-in cartridges, containing



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Japan chip surprise but NEC has said that it will start test marketing the one Mbit ROM

in two months' time:

early in July.

Oki is expected to make its first

deliveries ister that month, or

Industry sources expressed sur-prise at the announcement, but

many recent Japanese microcom-puters have appeared with plugs for ROM cards to carry conven-

though no board announcements have been made.

The trend towards board and ROM-based application software carriers would create just the mar-

ket needed to pay for volume pro-duction of one Mbit chips, which

could cost up to £30 each unless

produced in quantities over 5,000.

tional application software.

by Kevin Cahill

THE Japanese have once more taken the semiconductor business companies plan to start almost imrediste deliveries of one Mbit

separstely from Nippon Electric Company and Oki, both of which have headquarters in Tokyo and marketing operations worldwide. Before this announcement the furthest advance in the field was seen to lie with Hitachi, which is

The snnouncements came

promising deliveries of a 256 Kbit ROM chip this quarter. US companies in the market are still generally supplying 128 Kbit devices, and are unlikely to have matched Hitachi's 256K chip be-

The Oki announcement did not include any detailed information,

PO workers protest Peachtree in UK... Op Spot Laser storage rivals

Phone lines not enough

Software File Company News Micro News Glib's Mythodology Jobs: Pages 26/47 System of the land of the land

hy Donald Kenoett

FURTHER union opposition to Mercury Communications' nval to the British Telecom network has come from the London City branch of the Post Office Engineer of the Post Office Engineer unanimous approval

munications.

Liverpool Internal branch secretary Phil Holt, who is also chairman of the British Telecom Union Committee (formetly the Council of Post Office Unions), said there of the Post Office Engineer unanimous approval

A spokesman for Mercury said the consortium was worried about union opposition, but was trying to keep out of politics as it had done all along.

Noliody is volunteering to put the government's and private inunion's head office last week after eirculating other branches for Mercury among BT staff unions.

was almost unanimous approval

support.

A campaign to prevent the startup of Mercury was launched last
month by Liverpool Internal
branch with a fighting fund of over
\$1,000\$

Discussions were being held on
finances for meetings, advertising
and other aspects of the campaign
and on co-ordinating it into more
widespread opposition to privatisation generally.

On the other hand, the POEU

Nolody is volunteering to put the government's and private industry's ease in unioo members. Our Parliamentary correspondent adds: The Post Office Engi-

neering Union has been disturbed by leaks that the Home Office intends to ignore the Dept of Industry's deaire to provide a modern aystem of eable. Instead it will approve a pateh-up system in the interests of Visionhire and Redifitision, one of the union's sponsored MPs, John Golding stated in

But Kenneth Baker, Minister for loformation Technology, said that rumours were unfounded.



£10m govt boost for

ita Software Products Scheme over the oext three years.

Keaneth Baker, Minister for loformatioo Teehoology, has made it clear that in addition to the latest funding the project is to be given a new look and a sharper definition of its objectives.

Although the scheme will continue to be administered by the National Computing Ccotre (NCC), it will be guided by an advisory committee drawn from the computer industry, including three members of the CSA Software Products Committee.

Brian Cudhy, operations director of BIS Software, is to be chairman of the advisory committee, aided by David Roberta of RTZ Computer Services and Dr Robert Wordco of Logica.

Other committee members are Eric Howe of the National Computer Users' Forum; David Else of the NCC; Nicolas Bernard and Tom Fleming of the Department of Industry.

Tom Fleming of the Department of Industry; and Dr Douglas Eyeions, director-geogral of the

software

Maggie McLening

AS promised in the last Budget, the government is to give a £10 million cash lojection to revitalise ita Software Products Scheme

No ceiling has officially been set for the maximum amount a company may receive. Allocation of the funde has been divided up

Lindop joins outcry on products handled by Ruffe butter division. The 6K is machine starts at \$1,7%. privacy White Paper

SIR Norman Lindop, ehairman of the committee which advised the last Labour administration on data protection, has joined the growing list of critics of the government's White Paper on plans for data protection legislation.

Sir Norman, in an address to the fourth annual Grace Hopper Lecture at Thamea Polytechnie, des-cribed the White Paper as "the latest in a long list of government hesitations and prevarications" on the subject.

He said that the White Paper, which takes only seven and a half pages to aet out the need and proposals for legislation was "very sketchy". He is very concerned about the potential oumber of exemptions from control which the White Paper allows.

Sir Norman described the pub-lie sector as representing the main danger as far as privacy is con-cerned, because of the massive legislation

amount of sensitive data held

He added that while the right of access to information was not "universally applicable", that does not mean that public sector organi-sations should be allowed to use computers indiscriminately, without any external control.

He repeated the call made in the Lindop Committee report for codes of practice governing the usc of all computer aystems.

He said that most people had "an ambivalent attitude" to the security forces, and the situation would not be helped if there were widespread exemptions in the security forces' use of computers.

Sir Norman believas that the data protection authority should liave at least one person with security elearance, so that police and national security systems do not fall outside the ambit of the

chalked up over 400,000 sales; he has just launched the Spectrum, a colour personal computer, and a few months back he made a major deal with ICL for the aale of mini

Sinelair Research and is expected to offer anything from £2 million to £5 million for the stake.

be available in the UK is the picked up awards for his executive calculator in 1973, the Sovereign pocket calculator in 1977 and the Microvision pocket TV in 1978.

Mullard was the other information technology company to win a Design Council Award for a microprocessor.

The French and UK electronics industries ask for a survival plan

Counter-attack after 'Japanese invasion'

by Jack Gee
FRANCE's computer and dectionics industry has submitted what it calls o "survival plan" to what it calls o "s the government sa a counter to the invasion of Japanese products.

The cribing itself as "the world's "The French computer industry

NEWS BRIE

US, Japan

set up high

tech study

THE US and Japan have a set up a working group and differences on high new trade issues. The US is a casier access to Japan have technology products which looking for more joint serves search projects between

search projects between the

Rair micro

MICROCOMPUTER DE

turer and periphen 657. Rair is to market the Kera

personal computer. The points peripherals and to from Texas Instrument, E. Hazeltine and Diable in the products bandle in the

More memory

GOULD SEL has critical 32/87 range of 3.7 mirs i minis to higher memoryapa. The new packages will tell as the 32/8720 models and zero coating £175,000 and 104 depending oo the six of armodule used, and a two commodule used, and a two commodule used, and a two commodule used.

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of software pschages for is-microcomputer and 860 in-tion processor. The del Munich-based Micro-Pro-

has launched the first Er -

translation of one of ill f Wordstar word processing

age. The three-year agreement result in products being available in 10 languages in f.

Adabas-VAX

DATABASE system Adaha a be available in the UK for I

Thursday

CIRCULAT

and Australasis.

Japanese companies
The idea of the society.
was proposed by the harder minister in Japanese. number four power" in computers and electronics, the French Electronic Industries Group points

The French computer industry refuses to let its exports to Japan represent only six per eent of Japan nese sales to France. We demand out that these products accounted an increase in our technologics for over one third of France's r de and trade presence in Japan and a

The group said the defic n this field between France a: Japan his been growing annually since 1979 at a rate of FFr1 billion (£100 million) a year, rising from FFr3 billion to FFr4 billion in 1981. billion to FFr4 billion in 1981. nese products in proportion with The Ftench manufacturers said: French exports to Japan."

The French manufacturers said:

The only way to beat the Japanese is to adopt similar methods and a similar philosophy."

The group urged that France must copy Japan's track protection methods by introducing "safeguard procedures of the some type as those which have succeeded so wellin Japan."

Trench exports to Japan. The industrialists said that French sales to Japan must be raised from a current six per cent of seventy per cent of Japanese sales to France over the next ten years, with an annual rate of increase of seven per cent.

The group said: "If the Japanese refuse, strict import quota mea-

rease of seven per eent.

The group said: "If the Japanese refuse, strict import quota measures must be limited by an array of regulations to supplement those already in force.

The group said: "If the Japanese refuse, strict import quota measures must be introduced for computer products in the same manner as those already imposed upon cars."

Report criticises govt procurement policy GOVERNMENT procurement concentrated un companies hest policy must be directed towards ploced to build internationally

complete range of government aid

The manufacturers added: "But

the best means of pressure which France can exercise is to limit the opening of our frontiets to Japa-

ading companies to develop pro-ducts which can be marketed subsequently rejected by Informa-mernationally. Otherwise UK Baker in February. promised a reply to the report in

with the government.

Sir Henry Chilver, chairman of the Electronics Economie De- the autumn. National Economic Development Founcil, made this point last week while highlighting current defi-ciences in the government policy

orners in the government policy on high technology.

Thilver added that the various potential aid schemes should mice greater priority to electronics. He was speaking on the publication of his committee's report contial Policy for the UK Electronical Industry.

The teport, which was released in outline late last year, takes UK firms to 128k for having concentiated on the domestic market, which it says is too small to sustain

companies will end up trading only

which it says is too small to sustain idliciem production volumes in many product ranges. This has resulted in failure to achieve significant shares of world markets or roots and competitive cost and business advantages.

The final report places less em-



phasis on government support than the previous one published an October. That proposed that ternational products.

PCM user group forms

of their own to deal with the councomputers. A group of PCM cusinspects is getting together in the US to form a user group, and they plan in extend the idea to Europe within six months.

The problem for PCM users is that they are not a homogeneous

the problem for PCM users is that they are not a homogeneous group. There are about 10 suppliers will BM compsuble CPUs in Europe, and that group is shortly to be swelled by the addition of ICL. The industry is dominated by Amdahl and National Advanced Systems, which between them cootrol about 80% of the 1,500 or so non-IBM machines running IBM software.

Many of them classical and the statement of the 1,500 or so non-IBM machines running IBM software.

Many of them also have IBM kit at their sites, so they are eligible to ioin the IBM Computer Users' Association. But this only represents their interests with IBM. Now,

by Kevan Pearson
USERS of IUM plug compatible
with a PCM users' group, provisionally titled Plug, just over the horizon, they can look forward being able to provide a united front to any of the manufacturers

in the field.

The group plans to hold its first conference in May in the US. It in the US at the moment.

DEC, DG

DATUS

Peachtree set to take on Apple, Osborne in UK

by Maggle Me Lening SOFTWARE aupplier Peachtree is planning an all-out attack on the Apple and Osborne microcom-

Although it is une of the biggest suppliers of software for the Apple in the US, Peachtree, part of Man-agement Science America, has unil now left the UK market alone. Managing director John Hale said that at first there appeared to be too much competition here, but hat his views had changed adically since the UK operation

was set up in December last year.
"Although there is a lot of soft-ware available, most of it is absolute rubbish because there is more Plenty of companies have written programs, but underestimated the importance of debugging, stability, documentation and

marketing," he explained.

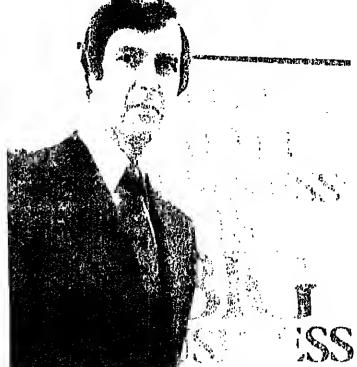
September will see the launch of the Apple and Osborne I nachines, including integrated ac-

want as it calculated by standard packages such as Wordstar, but in the UK Peachtree will remain independent to sell to individual Osborne dealers.

The software for the UK will b anglieised versions of the packages now selling in the US, written ir MBasic. Peachtree has other plans for the Apple III machine as soon as a CIS Cobol compiler is an-Peachtree has bought software

house CSA Microsystems of Gerrards Cross, and with CSA has ting packages written in CIS Cobol as well as a 20-strong user base. The name of the company is to be changed to Peachtree Business Management Systems, and it is to cuntinue developing CIS Co-bol programs under Peachtree's in-

"The demand for Cobol programs on micros is enurmous,



COMPUTER WEEKLY, May 6, 1982

cummented Hale.

leading Apple dealer in the UK.
"Although the range of software

so we decided we needed to acquire some for business reasons," cummented Hale.

for the Apple III is picking up nicely, this move hy Peachtree can only do us guad. The sort of feedback that I'm getting from dealers gel Hearne, product manager for is that customers would like more Apple III at Microsense, the of a choice of software, so an inerease is certainly guing to buost

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The meeting, held in the POEU's car park, heard general secretary Bryan Stanley say that the national executive had decided supports the government's proposed wideband cable network' which is designed to carry cable to take any action necessary to oppose the connection of Mercury to
British Telecom's network and any

communications servicea, provided that it is controlled by BT further liberalisation of relecom- and installed by its members.

His book is based oo obser-

vations of the day-to-day working environment at Data General's Westborough headquarters in

Massachusetts where an unofficial research team plots to bring out a

32-bit minicomputer shead of the

The film company Columbia has

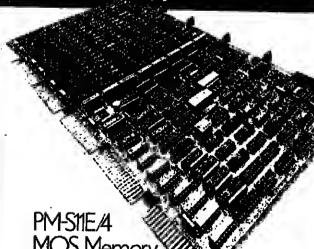
taken out a one-year option on the book with the right to renew the

official research team, and wins.

DP book wins prize TRACY KIDDER, author of The Soul of a New Machine, has won the Pulitzer Prize for non-fiction.

KIDDER . . . Pulitzer Prize





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over the three years into £3.6 million for 1982-3 (which includes £1.6 million unspent in 1981-2), £4 million for 1983-4 and £5 mil-lioo for 1984-5.

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Editor and Publisher Bimon Timm

Seftware Editor

Chief Sub-editor Mike Marples

A DESIGN Council award has capped a good year for Clive Sinelair and his company, Sinelair Re-

Sinclair's ZX81 microcomputer, Sinclair's ZX81 microcomputer, which won the award, has now

Design award for ZX81

Sinclair is no stranger to the Design Council Awards. He picked up awards for his executive calculator in 1973, the Sovereign pocket calculator in 1977 and the Microvi-

terminals. Later in the year a group of City

May 6, 1982

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Universities switch



Govt arm backs OCR

The Central Computer and Telecommunications Agency, the government's computer buying arm, has issued guidance to government departments to look at

online teleprocessing for the large quantities of "turnarnund" forms such aa gaa bills and tax demanda

by Boris Seilacea

THE unimpressive market record of optical character recognition technology looks set for a tempo
OCR Scandata is hoping to grah a alice of this market, using the Ministry of Defence as a reference attended to the property of the prop reading system was installed last September at the Defence Codification Data Centre at RAF Hulla-roarketing in the UK.

> "Access currently uses our equipment for payment vouchers and we are hoping to interest them in trials on sales vouchers. We are also talking to Barclaycard."

leadership of the French government's new five-year computer components plan whose details are components plan whose details are to be announced in July.

The Eurotechnique chief exproducts directed at the mass contracted concerns about the government's new five-year computer components.

The Eurotechnique chief exproducts directed at the mass contracted concerns about the government's new five-year components.

vington, near Swindon, where it processes up to 7,500 A4-sized stock control forms a day.

One of the form of the mixed-media OCR and key-to-disc data entry equipment.

OCR technology perpetuates the technologically unglamorous market for batch processing. But in banks, building societies and in the case of government departments it is a better method than online teleprocessing for the large ment specials for Aregon, but would no longer market the IVS-3 aa a syatem. Aregon has set up its own de-

'Eurotechnique should lead French plan'

by Jack Gee

EUROTECHNIQUE, the partnership between National
Semiconductor and France's recently nationalised Saint Gobain
The others are concerned only

Semiconductor is not necessarily the world's beat manufacturer of integrated circuits. But it is the only one which is genuinely ready to co-operate.

Semiconductor is not necessarily the world's beat manufacturer of integrated circuits. But it is the only one which is genuinely ready to co-operate.

Semiconductor is not necessarily the world's beat manufacturer of integrated circuits. But it is the only one which is genuinely ready to co-operate.

Semiconductor is not necessarily the world's beat manufacturer of integrated circuits. But it is the only one which is genuinely ready to co-operate.

Semiconductor and France's re-only one which is genuinely ready to co-operate.

The others are concerned only will set up a genuine industrial built to prevent the France's will set up a genuine industrial built to prevent the France's concerned only the world's beat manufacturer of integrated circuits. But it is the only one which is genuinely ready to co-operate.

Semiconductor is not necessarily the world's beat manufacturer of integrated circuits. But it is the only one which is genuinely ready to co-operate.

velopment centre in South Lon-

by Kevan Pearson LEADING suppliers of disc tech-nology are forming their battle lines in anticipation of a rapid

growth in the market for laser-based optical atorage devices.

Two rival, but related technolo-

gica, have emerged. The major dif-ference between them is that one

actually burns holes in a mesallic

layer on an optical disc, while the

other heats the metal up to create a

second largest manufacturer of computer media in the world, and

hilips, the Dutch electronics gi-

ant. It is also being backed by one of the pioneers in laser optical data

recording, Drexler Technology of

Aregon to sell itself

Drexler is not well known outside its American market, but it pioneered the use of laser readable

The two great advantages claimed for optical discs over more tape for computer aystems m re-A single reel of tape can hold up to 50 gigabytes of data. The other type of optical disc is

Laser storage rivals

prepare for battle

being supported by another joint venture between office equipment manufacturer Xerox and the French electronics combine hlister of expanded gas to serve the same purpose as the hole.

Both techniques have major companies backing. The "hole" technique is supported by a joint venture between Control Data, the Thomson CSF. It is also heing developed by Shugart Associates, the Xerox subsidiary which initiated the 5¼" "mini" Winchester type

benefits for their type of recording, but until production models are available it will be impossible 10 make verifiable claims for either system. And the CDC-Philips venture does not expect to have a marketable product until

Although SDL developed the

der contract to Aregon, Aregon

was now developing the gateway for IVS-3 itself. SDL will use it as

a component in its turnkey

systems. Taylor expects Aregon to reciprocate by selling SDL's new

Publish-R database management

Grand-Clement urged that Eu-

rotechnique should become an in-duatrial partner of CII-Honeywell

Bull to prevent the Franco-American computer firm from de-veloping a CMOS effort of its own. He added: "The entire commer-

cial and technological battle today

is being fought over memories. Firms which do not make

memories are doomed. But those

which make only memories and

which are not geared to manufac-

ture microprocessors are alac

claimed for optical disca over more conventional media are the masplace conventional magnetic tape.
A single reel of tape can hold up to 50 gigabytes of data.

Sive volumes of data — with bit densities up to 100 times those available with magnetic media, says Shugart - and the lower risk of mechanical failure. The read/ write bead is about 100 microns (one micron = a billionth of a milimetre) above the disc as opposed to less than one micron for thin

autumn 1983. The system will place a teleprinter network will orovide message with and bulletin board facilities. film heads on conventional discs.
On the negative side, the discs are non-erasable, but space can be left available on the disc for up-CAD for Meyer

planning and is to be completed

SHADE Computer Service in won an order from Montage I Meyer, the UK's largest the

trading company, for 1 (3) system based oo a Gold M 1 32/27 32-bit mini. It will be to 1

designing timber frame but it ding components. It system's database will hold be

3,000 items from which to pmin

parts schedulea, order bu, &

livery lists and manufacturing bi

Mbyte dual processor Bunyas B6900 mainframe for its Wd.;

headquarters. It will refler a number of smaller Burroughest

Rediffusion computer and the build up holding files on the

justifiable aspect of the company

THE UK subsidiary of by

Computer has won an order fr: Domain distributed interensystero from oil platform centing engineers John Brown E. and Wright. The system &

each user to run up to 16 kg

scale Fortran processes one

rently and provides variate

ahaped windows onto them-each workstation's high-resolu-

BRITISH Telecom has order-

nearly £1.5 million worth of :

equipment for its engineers. It equipment will also be used make up comprehensive bridge

kits to support the new data vices. Main items are program

ble, including the Navtel Supers

data tester, the Tektronix 834 de

analyser and the Sierra 808A

THE Dental Estimates Bor

which handles dentiats' chins at

frequency test set.

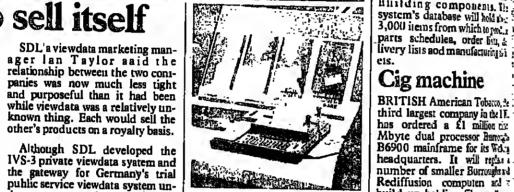
Dental data

Rigged up

Cig machine

dates and changea.

The major manufacturers do not see the optical disc as a direct rival for magnetic media. Its main use will be in archival applications, for backing up conventional storage and in the "office of the future" to replace paper files.



The Panasonic hand-held computer.

'Total' hand-held system

by Kevin Cahill A HAND-HELD computer weighing l Vib and complete with a suite of application activate packages was launched on the European market at Hanover Fair.

Not much bigger than a pocket calculator, the Panasonic RL RRITISH Telecom has H1000 was shown in a variety of

Described by Panasonic as a total computer system, the H1000 bas 2K of RAM memory expands-ble to 52K with a basic ROM chip of 16K. There are socketa for up to three further 16K ROM capsules, which demonstrates a trend, in common with other Japanese companies, towards the use of pre-prorammed ROM chips instead of loppy disc or other magnetic

media-based programa.

The hand-held micro comea with a limited liquid crystal payment under the National Health Service, has ordered on display which can show about 28 characters, but the machine can be Kode XL40 data preparain made to US (or NTSC) standards.

Colour graphics software is available.

The

The conversion to PAL televiion used in most of Europe is will include Kode Triplets sion used in most of Europe is

the 195 keystations to be come One of the more interesting aspects of the machine was the wide range of software available with it, most of it prepared for Panasonic in America. The principal language offering is Snap Basic, a Basic specially adapted to the operating system which drives the H 1000.

The machine was launched in Germany at a basic price of £350, but plans for a UK launch are atill not available from the Panasonic mirror discs and peripherical witching. One of the more interesting as-

not available from the Panasonic Matsushita office in Slough. Mid-1983 is thought to be a likely date.

BUSINESS SYSTEMS ANALYSIS AND DESIGN M8s and Diploma Courses 1902/83

CAP lands £545,000 police deal CAP has won a £545,000 here contract from Durham Police supply a network based of the Parking Police in Pa

contract from Durham Policy supply a network based on a Perkin-Elmer 3230s and 225 Milgo communication to ment. This will link it may sites to headquarter and and by Donald Kenoett
IBM will become increasingly dependent upon wideband satellitebased communications chaonels to
support the products it launches
support the pert 10 years, according bolice national combiner night over the next 10 years, according to US authority Dr Dixon Doll.

Speaking at a seminar on in-The contract follows the sad 1

formation system strategies run by his company, DMW, Doll and his colleagues covered a range of promioently in most of them.

Concerning wideband networking, Doll said IBM was participat-

Systems venture because it needed to be sure the capacity would be there to handle transmissions be-tween PABXs and between storage

systems stuck with no way to get the data between locations fast enough, because users have to rely on voice grade telephone lines,"

In the next two or three years it would launch an improved version

large corporations, however, had installed satellite links for bulk data transfer and video conferencing, or in order to own their own subjects from programmerless apsubjects from programmeriess application development to local area plication development to local area networks — and IBM featured promioently in most of them.

Concerning widehand network—

Concerning widehand netwo years, he added.

over the last two or three years,

communications controller, with facilities.

"It has to make sure it won't have all these high-powered have all the high-powered high-powered have all the high-powered high-po



of its 1750 small PABX both in The communications products that could be expected from IBM this year included a higher performance version of the 3705 data they were the key to controlling they are the key to controlling the key to c

Almost all suppliers recognised that electronic mail would be one of the most important opportunity greas for users in the next five years, but few PABXa had

IBM's local network producta would disappoint those that were hoping for radically new systems. The first local network would be designed to solve the mundane problem of reducing the cabling between 3270 terminals and clussimple baseband serial ring using

ties on each site.

For the switching function, the

British Telecom's SwitchStream

leased lines for the routes carrying

the most traffic - 80% of the traf-

to open networking by Donald Kennett fic on the previous network was SOUTH-WEST Universities Read from SWURCC's ICL 2980.

gional Computing Centre has led the UK into open networking. Last week the centre closed down the H-year-old Control Data 1700 which had provided switching and protocol conversion facilities for links between SWINGC and the H-inspection of

SWURCC and the Universities of Bristol, Bath, Exeter, Cardiff, and the University of Wales Institute of Science and Technology. Implementing them on the re maining machines in SWURCC's network has enabled the CDC 1700 awitching computer to be removed. It also means that in-In the open networking system which replaces it, standard proto-cols are used. The X25 internaperconnection can easily be achieved with machines elsewhere in the country.

tionsl packet switching atandard, and UK interim atandarda for higher-level functions auch as transferring files, handling termi-nala and setting up calls, are imple-Implementations of the proto-cols written for Digital Equip-ment, ICL, Honeywell and GEC machines have now been circulated to other UK universities and the mainframes that are linked toenable them to increase the benegether, or in network interface fits of sharing resources such as processors based on GEC 4000 software, databases, support staff series minia which also provide processing power and storage. local X25-based networking facili-

The UK interim standards im demented include the Yellow Book transport service, the Blue Green Book terminal handling functions and SWURCC's own job One) is used, supplemented by transfer protocol

Honeywell takes stake in videotex firm

recently formed company based in Cheago. Keycom Electronic Pubusers. lishing will begin a commercial videotex service in mid-1983.

media conglomerate that publishes rectales cable and broadcast TV stations, and Honeywell.
The service will rely heavily on

tiations are currently under way with several other un-named database suppliers. The service will

by Howard Karten
A NEW videolex service in the
US, probably to include home
shopping, is to be launched by a
Howard Karten
be Keyfax and Nite-Owl, which
are teletext services formally run
by Field Electronic Publishing
Inc, a subsidiary of Field Enter-

The service will be priced on a the structure of the latest entrant into the statest feld is a joint venture of Cantel Carp, a telephone operating company, Field Ecoreprises Inc., a market, so subscribers can chose the Chicago Sun-Times and whatever individual services they

Centel will hold 54% of the joint information and databases provided by Field Enterprises. Negotiations are currently was a compatible with the supposed the compatible with the supposed US standard announced last year by

This is Honeywell's second par

hardware. Robert Nichols, president of Keycom, emphasised that the venture was not an experiment, but taker a money-making enterprise. Into is Pronegywell's Second participation in a videotex service. A Honeywell spokeaman said it would be fair to characterise the come as an effort to move more saider a money-making enterprise. Part of the assets of Keycom will field.

Device replaces cables

by Kevin Cahill
"I DON'T ever want anyone to have to climb under the tiles of a computer ecoure floor again," said lienry Morgan, president of T-Bar international, at the launch of his matrix switching system onto the European market.

lerconnections between hundreds of pieces of equipment, such as

The VSM replaces an assort-

ment of connection methods, such as cables, plugs and back-to-back multiplexers.

The virtual switch matrix device instantly reconfigures all the inrunning real time systems, but T modems, multiplexers and front-end processors, without the need ler installations.

TASS is already fighting to restructure the AURW, and is ensuged in a fight with the ES over which section should represent technicians on the shop floor.

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LIMITED

TEXAS INSTRUMENTS

ment's new five-year computer components plan whose details are to be announced in July. Jean-Luc Grand-Clement, managing director of Eurotechnique, said hia organisation should be chosen in preference to the Thomson-Motorola and Matra-Harris aliances for thia key role. Canad Clement, raid "Marional organisation should be concern about the government's decision that Saint Gobain, which is the major partner in Cll-Honeywell Bull as well as holding a 51% stake in Eurotechnique, ambitious development plan at the request of the government. This provides for a turnover of 1.3 billomorrow's printer Yesterday's price. There has always been one big problem with the General Electric TermiNet 2000 senes matrix printers from Zygal It's not that they're a new breed of matrix printers, so activanced, so functional that's the

problem. Their reliability has never been questioned. It's true that they are very quiet in operation, easy-to-use, easy-to-carry. The sleek clean lines complement all decors. Hewer moving parts. A choice of 60 cps and 150 cps models mether keyboard or receive only configurations. Each with higher print quality, including descenders and underline

So, what has been the problem? Cost Considering their performance, the TermiNet 2000 series matrix printers from Zygal have always been excellent value. But, now, they are available at around the same price as other more basic printers. But only from Zygal. And not for long. Send off the coupon.

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Stock control

Stock control

SYSTIME has sold a 5201,00
Series 6700 computer to a 161.
Iands-based electrical distribute.
Coventry Factors has bought in
system, which includes System's
SYSIMP and SYSFIM manufacturing and fibancial packages is
turing and fibancial packages is
gether with other software work
230,000, primarily for stock and

AUEW membership battle

by Andrew Thomas

Till: Introduction of new techactions, its interest of the Amalgamated Union of Bugineering Workera (AUEW), is the between the moderate-dominated Engineering Section (ES) and the kii-wing Technical, Administrative and Supervisory Staffs section

TASS of the union.

TASS is almost a technical at the recent AURW conference in Eastbourne that the ES has won the battles for representation at Plessey and Ferranti. Meanwhile, TASS has won negotiating rights at Lucas Engineering.

BS national committee, claimed at the recent AURW conference in Eastbourne that the ES has won the battles for representation at Plessey and Ferranti. Meanwhile, TASS has won negotiating rights at Lucas Engineering.

BASEL ACKES FROM PINK.

Terry Duffy, president of the

£100,000 budget for your next computer? Make sure you check

MOMENTUM

£100K may be your total budget, or that may be just for starters. Either way, it's a lot of money. To get the best out of that money, you'll add on-line terminals. And the more successful you are, the more terminals you'll add.

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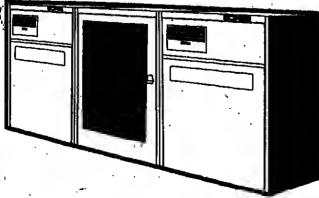
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The Computers with MOMENTUM





Plans to enlighten the public NOISE has been a relatively late designations and large road signs, addition to our ever-growing list of eovironmental pollutants. But the eovironmental pollutants. But the with information about the surrounding area, including buildrealisation that hearing damage can result from even relatively low moment," commented Isu Strat-ford, head of consultancy at ARC. noise levels, if exposure is He added that the company

been completed, it also helps in th

minst the size, or lack of, a grant. The package was originally de

A ploneering program de-scloped by the GLC for the exam-ination of noise on London's roads, has since been redeveloped by Applied Research of Cambridge and widely used in the planning of ation Regulations of 1975. Using the noise level informa tion, Mwsy can then specify which properties in the vicinity, if any, will qualify for noise insulation

Highway Authorities

The enhancements mean that Mway will be able to produce detaled overall plans of the environment in different colours and line plot decibel ooise values for any parts of existing buildings. These plans may theo be shown to the general public by highway planners.

Data covering the proposed monorway, such as its width, lane seventes, brought up to date in regulations from the Department of Transport. Being geared to British regulations has tended to restrict sales of the £5,000 system.

"It is a limited market because few authorities apart from the De-

chancements to consultants

sold, but the majority of

lo the past APL has largely been

been produced.

benefits APL*Plus

Lower-cost hardware

Cocking and Drury confirms the view of bureau APL Plus that fallnore of its users to buy in-house APL could be of use is that The bureau is a subsidiary of the creating a report budget for the year: the figures, which are easy to produce with APL but difficult to STSC international time sharing service, and first offered its own cersion of the APL language, built get into neat columns with rounding options, can be formatted a up over 13 years' experience, 18 E27,000. Teo of the systems have

Multi-national companie wanting to input data from all over the world, but restrict access t confidential data, could also make

and few commercial systems bave the major problems in getting API ing and security. It is known to be to go along with a cageful of loc-clever and elegant but not all that useful excess in the commented sadly. useful except in a scientific way,"

*They're disappointed when tho
explained Mike Hardwidge, manall turn up in suits."

RDBMS runs under Unix

DATABASB manager Maratbon, based on the relational model operating under Unix, is now available from Woking-based Optichrome Computer Systems Limited (OCSL). Developed by Relational Database Systems Inc. Marathoo offers general purpose larathoo offers general purpose information management and in-

for all the figure of host interior as to

Low claim bonus

COMPANIES faced with the invi dious choice between paying high insurance premiums to cover com-puter breakdowns and risking machine failure without compensation, may be interested in scheme started by Lincoln House Computer Services.

For an annual service charge of domation offers general purpose up to 10% of the machine purchase price, Lincoln House offers full maintenance and insurance cover, with a "low claim bonus" incentaration database. out rate;

now looking for ways to adapt Mway for the overseas market possibly Hong Kong.

of the Osborne 1 microcomputer that took the US market by storm

keen to build up its library of authorised software to 100

and to encourage software authors

with ideas for systems that make

iblisher and ask authors to

cluding the size and location of the intended market, "explained Mike Healy, managing director of Os-

A list of guidelines for would-be

software suppliers will sbortly be

ssued in the UK, probably during

Milton Keynes.

You also get a status line which reminds you of how

And of course, you also have the facility to make

And a choice of either character or block mode, so

All these models can be teamed up with ITT's

And they're all backedup by the nationwide sales

So if you'd like to talk business with your computer.

and service support of ITT Business Systems, Europe's

you can key directly into the computer, or prepare data

on the screen to your scrittaction and send it as a block.

ITT VDUs can store up to 7 pages or t68 lines of data.

corrections, because we all make mislakes,

with almost any computer on the market.

largest telecommunications company.

use with ITT's 6100 switching system.

compact advanced dataprinters.

send off for more information.

the terminal is operating.

extremely easy to use.

these might be payable in advance, and mainframe manufscturers who once the program has been pro-

Osborne leaps on the

third party bandwagon

ware houses. As a machine runoperating system, Osborne 1 users alresdy have access to s wealth of packaged software, little of which utilises its portability.

"One of the objectives of the scheme is to make authors aware of the size of the market - there are worldwide," said Healy. "We are also doing this because we feel there is a need for independent software publishers and we are in s

The type of applications machine's portability could be for tants who would work from s variety of basea and take the Osborne I with them.

It has already been used nalism, for filing copy on trips abroad, and is expected to be used

Perhaps the most unusual appli cation so far is the one in use at Wilton & Partners, project man-African and South American assignments. They have bought four machines of which three are based

via a standard acoustic coupler to



best terminal, you'll never be able to find out.

Withan ITT VDU however, you'll instantly be able to find out what your computer is thinking.

The crisp, clear disptay gives you instant access to all the data you need.

And because all three models in the ITT through are microprocessor based, they're versatile, enough for any number of different requirements.

Encrepanally you get a line drawing character.

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The crisp, clear disptay gives you instant access the your need.

The crisp, clear d enough tor any number of different requirements. For example, you get a line drawing character set so you can create bar charts, torms and graphs.

> See our great range of terminals at the World Trade Centre, London May 17th/18th.

Something else worth remembering is the tack that	World Trade Centre, London May 17th/10
Ditis can store up to 7 pages or too lines of acta.	I WOULD LIKE TO AFTEND THE DEMONSTRATION
Despite this sophistication however they te all	I AM SORRY! CANNOT ATTEND BUT PLEASE SEND ME FURTHER DET
mely easy to use. The tTT 324t, 3242 and 3244 are designed to work	To: Barbara Pearson, ITT Business Systems, Lion Buildin
almost any computer on the market.	Crowhursl Road, Hollingbury, Brighlon, Sussex BN t 8AN. Name
And the tTT 3243 has been expressly designed for	Tille

Company

Systems builder climbs from nought to £1m in two years

Darkcrest, a systems builder which uses DEC processors and customised software and peripherals, produced turnover of £660,000 in its first year which ended July 1981. And now it aims to hit the million mark by its

1981 profits at £62,000 were res-

average per employee in that year. But it didn't happeo without the kiod of heartbreak which seems to hit every entrepreneur at lesst once

Nick Brackeobury, managing director of Darkcrest, had a long and successful career with DEC and Systime, before deciding to go it slonc. He had a false sist as a minority shareholder in a group of companies, but difficulties with the majority holder forced him to the Darkcrest offering. move and effectively write off two years of effort and investment.

The system is a PDP-11/44 control processor with 512K of

swallow his losses and start again.

He teamed up with fellow electronics engineer Roger Box.

They had £30,000 lent by friends

Box, who bad been with Brackenbury for the two years leading up to the formation of pectably above industry averages, but its six staff turned in sales four times higher than the industry ers always had a line oo the equip-

Brackenbury says that by the end of the first year, they had catablished a mixed user base of over 100 companies, about 25% of

That was the moment, he says, when he had to decide whether to go back to a company like DEC, or swallow his losses and start again.

He respect to with fellow.

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That was the moment, he says, when he had to decide whether to go back to a company like DEC, or swallow his losses and start again.

Peter Williams, the operations Darkcrest, while always using the DEC processor and the DEC operatiog system RSTS, will choose the best and most economic

Brackenbury is complimentary about the reliability of the Fujitsu Winchester which Darkcreat uses in some of its systems.

Darkcreat is based in an old building in Borough High Street, close to London Bridge.

Talking about the early days of the company, Brackenbury wryly suggested that without back facilities and with a very close connection between your income and your salary, you don't go for ex-pensive offices, cars or furniture.

Now Darkcrest has over 160 customers, about 40 of whom have complete Darkcrest installations.

the company's equity.

This gave it the necessary working capital, without the burdirector, points out that den of interest and capital repaymeots, for expansioo.

The company will reach £1 million turnover by July 1, with profits around £82,000, says

Like all companies of its size, Darkcrest is dependent on reference sites, one of which, Telemart, is in its own building. Readers io London who listen to Capital Radio and LBC will have

hesrd recently the ads for Telemart, the first computerised exchange and mart. Telemart is dependent on a computerised matching system linking sellers and buyers vis its own account. and buyers via its own operators.

Once the decision to set up Telemart had been taken, Darkcrest had four weeks to build its Record Data management-



The Darkcrest team, Nick Brackenbury (top), Peter Williams sine, :: Roger Box . . . aiming for £1 million turnover this year.

Ferranti takeover battle soon

ment sale expires to August, and the City is beginning to show some interest in the expected takeover

Neil Barton, an industry analyst at Manchester stockbrokers Henry Cook Lumaden and Co, suggests that neither potential Monopolies Commission referrals nor management coostraints will prevent all companies bidding.

He identifies Hawker Siddeley and STC, the ITT psrt-owned subsidiery as the most likely.

microcomputer range

compatible lines, cight of which type systems will drive LEDs, and a clock gen.

The ki

ware yet svailable for systems built

around chips like the 8086/8088

NEC is also ready to put money

into software development by third parties specifically for the

Beick Arnold. This would add to

FULLOWING its flurry of activity around the 58000 family, Monorola has come up with a batch (24 this time) and clock generator

of offerings in its 6805 single chip on the chip.

Increomputer range. These include new chips and evaluation and system design aids.

A further EPROM 6805 version features in a design/evaluation kit aimed at engineers — basically Two new microcomputer units mechanical cugiucers with little merease the variety of on-chip electronics experience. Culled Dethemory and I/O that surround the basic CPU. The MC6805P4 gives and offers the basic hardware and software building blocks Motorola deems necessary to develop proto-

set a business user back about £2,000 for a system with floppies

thematical and statistical packages. It has been lack of available soft-

But Japanese manufacturers are

since they were launched.

around chips like the 8086/8088 from Intel or Motorola's 68000.

There has been a particularly strong showing by the Japanese.

The UK arm of Nippon Electric, microcomputer market leader in its Japanese home base and showing strongly in the UK, has released a word processing software package called Benethark which takes sdvantage of the coloure apubility of its PC8000.

NEC is also ready to put money

£2,000 for a system with floppies and printer, according to sales manager Paul Streeter. CP/M will be available on the machine.

Canon, again selling Japanese machines with keyboard, screen and mass storage (though floppy drives this time) integrated into single units, is now offering spplication packages such as general ledger, secounts and invoice control for business users, and mathematical and statistical packages.

third parties specifically for the NIC machine, says business of the Canon machines in the year

the CP/M software base already not the only ones pushing hard on

available to the machine.

Sharp, tunning third in its Japanese liome market, has added to

Motorola extends 6805

The kit includes th erator. It also includes zero cross- MC68705P3L microcomputer ing detection and a self-cheek with its 112 bytes RAM and 1.8 mode. Customer software patterns Kbytes EPROM and 1/O and to be mask-programmed into the ROM are now being accepted by A/D and D/A converters, back-up RAM and displsy drives.

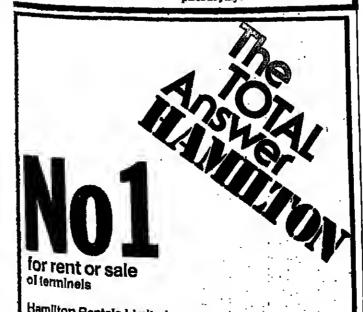
For users wanting EPROM on this rather than ROM comes the MC68705U3, a chip with 3,776 bytes of EPROM. It emulates the

Apple axes US retailer

manufacturer Apple is to end a terLand, itself a franchiser of small central purchasing agreement with terLand. The move is seen as try-

central purchasing agreement with its largest retail account, Computer Land dealers had a price advantage over the competit Apple dealers.
This sdvantage is to be removed

of 2,500 authorised dealers in the when the current agreement expires in July.



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Eight-bitters biting back — led by Japan EIGHT-BIT microcomputers since of 8-bit Z80-based microcomputers aloned at the bit machines lately, if only because the latter appear more glamorous. But the eight-bitters are making a comeback, playing much on the relative dearth of application aoftensive dearth of a policity dearth of a policity dearth of a policity dearth of CP/M compatibility that sdded Z80 boards would bring to its high-end business systems, which are based on a 6509 chip, a development of the 6502 for invelopment of the 6502 from its own chip manufacturer MOS

dore is making much of is the pric-

ing of its new machines, aiming hard at undercutting market rivals like the Apple II and III, and Atari 800 in mid-range 8-bit systems. This echoes a trend from various other manufacturers. Alsos re-

eently dropped prices on its smalmicro in the UK - has also cut the lest 8-bit systems, the Series 5 or "Little Box", which now weigh in ut around £2,200 for a twin floppy prices by between 19% and 29%. End users should now be able to get machines, with inbuilt floppy drives, from around £1,500, says Intertec, US msnufacturer of Intertec's UK representative the SuperBrain micro - which it claims to be the best selling CP/M

wider recognition for Intertee as a company - also promises systems with inbuilt Winchester discs for



DESPITE gloony first-quarter results, Texas Instruments is predicting a 10% increase to \$14.5 billion in the world semiconductor market in 1982.

According to T1 president Fred Buey, "In the US, demand in-creased in the first quarter over the fourth quarter of 1981, and this increased demand is continuing in April. Although many uncer-tainties remain for the nest term, we believe the world semiconduc-

we believe the world semicondife-tor market will grow at an average rate of 20% per year to resch \$45 billion by the late 1980s."

A sharp fall in profits from semiconductors was the major fea-ture in the company's 19% drop in income for the first quarter of the year. Net income was \$27.7 million on sales up 1.5% over the million on sales up 1.5% over the same quarter in 1981 at \$1,078

Bucy reckons that Texus' net emiconductor sales declined more than the total market's une per cent drop in dollar value

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AREMEIN OFFICIALLY BANS CICSPRING

U.N. SECURITY COUNCIL GRILLS CICSPRINT SUPPLIER - If IBM had inlended CICS to spool to Power and Power to spool to CICS, they would have done it themselves.

Decentralised CICS users are conditioned to delays in getting their batch reports, invoices etc. Same-day turnaround, on their own in-house CICS printers, would be harmful to them.

On the grounds that CICS users should not be permitted to visually review their own reports before printing them, or decide what to print and when, even though light security prevents misuse

 There is no way anybody can offer RJE facilities through CICS at a much lower price (they allege). If you want RJE facilities you have to pay RJE

WIN HAVE BEEN

THE WARRING WILLIAM TO THE TENTH OF THE TENT

I don't care. I'm a rcd-blooded, free-enterprise DOS/VSE user.	NAME
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	1.

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THE coveoant which prevents the sale of half of Ferranti's shares by the first purebasers at the govern-

subsidiary, as the most likely accepting a bid in either of contenders, with GEC and Plessey companies' shares, or cash.

Ferranti pushed its tumora: 1981 to £271 million, from £1

million the previous year, and profits showing a similar up and from £15 million to £20 million. Barton opts for an indepeter future for Ferranti ss the best

the possible outcomes. He suggests that growth is future will be even stronger that the past, with sbareholden r ceiving greater benefits fre holding Ferranti shares than to :

CW SHARES TABLE

Penne	London Brock Exchange	P*	mea	١ '	•	US Stock	'
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The table shows the closing prices of The London Stock Exchange on Tunday ed a America on Monday of last week. The Shars Index is based on the price of the Life companies in the table, Highs and Lows have been adjusted where necessary.

*Shares traded on the Unlisted Securities market or under Rule 163(2)(a).

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Business goals should always be made clear

The Second Principle of Infotecture: Goals should be stated so By what date? that they are as objectively in-terpretable as possible.

I AM no longer astounded by the fact that business goals, as well as

computer system goals, are consistently stated in an unclear manner. This seems to be true all over the world, in all industries and even in

companies.

There seems to be a human tradition of unclear goal specification. guages. Both seem equally igno-I understand the politician's desire to avoid being responsible for themselve failure to meet a goal too clearly stated. But I fail to sympathise stated. But I fail to sympathise a solution to a problem with clearly with professional management stated goals. It is a meaningless who deliver unclear goals to their exercise to develop solutions to

duce unnecessary costs, increase market profile . . ." when we see that
The problem from the point of the real problems

view of the system developer is:

 What are the relative priorities of conflicting goals?

such questions can the system developers hope to serve their mas-

Typical phraseology runa like his: "Improve productivity, reluce unnecessary costs, increase luce unnecessary costs, increase narket profile..." seems to be universal practice. We estimate surrounding it. It is a sign of professional competence that lutions and then "patch them up" someone both understanda the when we see that they do not solve

10 YEARS AGO I From Computer Weekly of May 4, 1972

AS part of the government's plan to aid the British computer industry, development contracts worth to total of £2 million are awarded seven as a commercial es well as scientific computing power, Ferrant sets of goals as many different sets of goals as you have people trying to find out what the goals are. to ICL by the Department of Induatry. All contracts are for advanced software and it is thought that ICL subsidiary Dataskil will earry oul the greater part of the work . . . Savings of about £37,000 have been echieved in this financiel year by the BCS in its eampaign to cut back costs following last year's deficit of £65,000 . . Burroughs Machines announces it is to lay off more than 950 employees at its Cum-

piiot instellation et Birdseye arc. distributor SPD, based on a Fer-£25,000 . . . In what is believed to be the largest single order ever placed in the UK for key-to-dise data preparation equipment, HM with the wisbes of the organisa-Customs and Excise has awarded tion's highest levels of managea contrect for four System 2100s

to Interscen Data. The equipment is worth about £400,000 . . . GEC-Elliot Automation hes chosen the World of Automation exhibition to announce the second in its current cargo of real time. than 950 employees at its Cumbernauld and Strathleven plants

In eeeking to establish itself

The world of Automation expenses to the project in incastrative normal difference in its current range of real time with a responsible manager above emputers, the GEC 4080.

Only by getting clear answers to

I suspect that both parties, boss the most well known high technology and "well-managed" of companies.

The most well known high technology and consultant, are to blame for the confusing language used to state goals. Both seem equally ignorant of the need for clearer lanrant of the clearer goal languages

> It is difficult enough to develop problems so unclearly stated, as number may be the uncertainty

Here are my criteria for "clearly

There is a simple test to see how clear the present system goals are. Ask all project participants to attempt by themselves to formulate the goals in measurable form. You

Clearly such differences in unrnoti Argus 600 and worth derstanding are already resulting in the project participants working in different directions, in conflict

been attained or not

and economic manner.

Goals about system attributes

(qualities and resources used)

ahould be measurable in a practical

It is useful to state attribute

goals in terms of "worst acceptable level", as well as "planned level".

• For comparison, the "present level" of the attributes should be

stated explicitly. It is unrealistic to

gether as a group to formulate the highest level of controlling goals for the project in measurable form.

DOWNTIME I

I HAVEN'T GOTA RECORD,

Not a shred

of evidence

THE destruction of hard copies of

security information, such as

salary lists, is the easiest task in the world, one would have thought.

tition for children under eleven to write an essay entitled: I Am A

POLISE
CC MOUTERS
EXEMPT
FROM
DATA
PROTECTION



Tom Gibb is an independent consultant, lecturer and outhor on comput-

has understood the exact manage-

● The degree of uncertainty about n goal level should be made explicit. For example 50 ±20 or "30 to 50". Uncertainty Is normal and the This is a most revealing exercise. You will probably find that management have rarely been subjected to such a hard examinamost important characteristic of s tion of their goals. They may sweat, but they will appreciate the point of the exercise.

In one case in New York, we someone both understanda the held an "inspection", a quality control comparison, of presidentially-approved goals, with the measurable goals which were de-rived from the presidentially-approved document. The inspection ook only thirty minutes by amateurs, but it revealed that the project leader had totally forgotten about twenty of the presidential

> This exercise reminded us of the importance of quality control of documentation at the inception of a project. It also reminded us that goals are not necessarily correct and complete just because we put them in messurable format.

I challenge every reader of this column, now, to try to do a one page reformulation of the goals you are presently using for your present major project or activity, into quantified format. It may be difficult, but it will be revealing and useful to you. Try it.

FOCUS Pulling themselves Compared Cekly together in public Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS

Integration, at Birmaria;

least, was not limited to make

public, several major organis.

parts together, a welcome it.

Racal led the way with 1 m.

bined presents doo by Radios munications, Racal Dan less

menta, Racal Milgo, Re. -Antennas, and Racal Tracke.

new group member the

apecialises in electronic fantra

GEC was similarly gening to

getber. Represented on it at

porate stand were GEC Can:

ters, GEC Telecommunicate and GEC Viewdata Synto

Rather more confusingly, GICL

formation Systems was present presenting Reliance Systems & A. B. Dick.

There was evidence of the na:

structure changes at IBM, v:

unity of purpose and makes strategies. Just about the

company not pulling itself togra-

failed to make an appearance

With incressing number !

company groupings offering the

automation systems, corporare tegration is essential if the fully

tenual of information technol

and procedures are to be realist

Lost in a

maze of

screens

WHAT greater glory can a rail age or system have than we menu driven? At the demonstration

HUMAN

Alan Simp

ated move.

fer systems.

the computer and communications industries is certainly striding shead. In fact, atandalone equipment could aoon be as rare as a week without IT Minister Kenneth Raker being in the stress. Electronics - joint wings - C. AEG, AKG, and Zellwage, L. tronix - runners up, concession were as basic as their party.

neth Baker being in the news. Only Antier Ltd and Onlo But while system integration is names at Earl's Court, when a doubt a prize would have be a would have be a warded for a CP/M transaction. being encouraged and supported by such authorities as the NCC and ITU, personnel integration evels seem as far off as ever. Datentechnik.

The Communications 82 exhibition at Birmingham last month most probably represented the ap-Visitors were authoritative, knowledgeable and much involved in cost effective products and tech-

In London, meanwhile, a Computer Fair was in progress, attended by equally authoritative, knowledgesble and cost-aware visitors. But there the similarity ended. While Birmingham visitors were conventionally attired in suits with matching briefcasea, the Barl's Court delegates favoured tee-ahirta, paper hata and plaatic

The microcomputer, bowever, featured heavily at both gatherings. At Birmingham the micro role was that of support — as a front-end communication devices or at the back end in a hand-held line diagnostic tester.

At Earl's Court the micro

tended to become involved in such matters as the Euromiero mouse contest, laserbugs and musical games, and was strongly supported by such organisations as Chatterbox, Essential, and the rather sin-

ister sounding KGB company.

Such dedicated fun and games were far from view at Birmingham where mice, bugs and paper hats would have been heavily stamped Tom Gilb on. Apart from a certain keenness to feature at the beginning or end

Blindly following the Japanese

velopment Council, has learnt to toe the government ideological line on state support for industry. Unfortunately, the latest strategy does no more than blindly follow the path

Last October, the NEDC role as a national forum for consultation between government, management and uniona suffered an embarrassing rebuff from the government. This followed a call by the Electronics Economic Development Committee for a concerted approach by government and industry to promote information technology.

IT Minister Kenneth Baker criticised the EEDC report for placing tuo much reliance on government initiatives. Now the HEDC has done a little more homework and made concrete suggestions which are more likely to please the

But although more realistic procurement policies on the part of government abould be valuable and easy enough to chieve, Neddy's call for companies to get together and select particular products for development is by no means assured of success.

Such discriminatory policies could introduce far greater risks into Britain's future performance. The government's own selective support agencies, particularly the National Enterprise Board have hardly a glowing record, and the larger companies, which are the only ones likely to take part in the strategy discussions, are today constantly beaten by small and far nimbler firms.

On the other hand, Neddy does not seem to apply its policy of selectivity to the case of Britain's response to apan's Fifth Generation Computer Project. It appears that the FEDC is calling fur competition across the board, in an attempt to produce a carbon copy of the Japanese approach.

Surely here we should be building on our existing strengths, particularly our software expertise. There is nothing wrong with marketing Japanese hardware if the price is right, as no doubt ICL will soon be demonstrating o great advantage.

Good news for some TOUCH

IBM has some good news for those long lines of disc starved computer users. It is planning to start deliveries of the much drlayed 3380 2.5 gigabyte disc system in the UK by the summer. The bad news is that industry experts warn that any deliveries are likely to be very low, and even then most 3380s will go to 3081 installations rather than the innre nunterous 3033 user base.

It is natural for IBM to do this, particularly in the light of reformance problems that have become apparent with the 3081. Not that the machine is slower than IBM claims - in some tests it is even faster - but unless the right peripherals are attached, and as far as discs are concerned that means the 3380, the machine cannot perform to its true

Nonetheless, it means that the furore of demand which trose so suddenly when the original delays on the 3380 were announced five months ago is soon likely to be repeated.

The ability of IBM to give this priority to 3081 usera follows the US government's granting of permission for the company to drop its sequential delivery policy, at least as far

Sequential delivery was forced on IBM as part of the 1956 anti-trust settlement, and the company is widely regarded to lave stuck by this policy rigidly since then. But it must b remembered that during this time the company was under threat of another anti-trust action - the 13 year-long case with the US Justice Department which was dropped in

While this no doubt pleases all the actual and potential users of 3081 series machines, it may not be such good news

enticing people to move to the 3081 was improved price performance and more facilities and functions.

With regard to your P.O. Giro account, we would advise you that computers will only accept eight-figure numbers and the P.O. therefore have to add the ninth figure by hadd.

Ops is not a dead end

l READ on the Op Spot page (CW PBX units by specially built April 81 of a DP manager from an operations background. As I assuch news as an encouragement to those operators who feel that their career is a dead end, you may find my own career progression of in-

terest.
Like Andy Wight, I do not have a degree, but am s member of both BCS and IDPM; the former attained by taking the BCS examina-tions. Neither the BCS nor the IDPM look down on members without degrees, several commit-tee members of both lack this "attribute". The only important fac tor is experience.

My reponsibilities encompass those of communications manager, data processing manager, information systems manager and new products marketing manager, so the ubiquitous, if somewhat pompous, title of manager - information technology provides a useful

I cinploy six operations staff (ops manager, senior op, four ops) and a junior systems analyst (position currently vacont and under

Our plans for the next two years include a number of interesting projects, for which I have now completed most of the specifica-

microprocessor based systems; the installation of a powerful mini to integrate nur news text editing and storage facilities with viewdote facilities, the development of special VDUs to interfsce to this new integrated system, links to the intercational PSS and the Stock Exchange Topic system; installs tion of video studios (we currently operate only radio studios), and many other areas.

My own, doubtless prejudiced view is that senior data processing executives in my type of position are severely disadvantaged if they do not have in-depth experience o all the areas of their responsibility In a small company like ours

this is particularly true. It would be very difficult for me to set operating rotas, evaluate equipment or see the potential of meny factors of new technningy without my operations background.

Any day, I would employ somebody with a few years' experieuce spread nver nperations, programming ond systems rather than a university graduate with the

Manager, information technology

University News Services

Communications breakdown

WHAT is the object of Infurma- merely means an increase in the tinn Techology? For the man at the input cud, it is the achievement of a system that will deliver his data to the recipient in the minimum of information lass along the way. For the recipient, it should include a built-in method of ensuring that he is able to evaluate the duta he is getting.

Now, ask womself — are the

new reclasslopies in fact delivering all this? Are they hell. In front nf me is a news report that the nation me is a news report that the nation may have to pay up to £3,000 million becouse of non-communication of a report issued in 1969. Horror stories of this kind surface almost daily. And please don't tell me that this has to do with "human fallibility", and is nothing ro do with technology. There exists a technoloby of human con-

Historically, there have often been such systems, generally events. Ghenghis Khan - who has hod a very bad press - invented one which enabled bands of nomadic tribesmen, not even speaking the same tongue, and ighting at night, to defeat the hest

The issue is, not whether there cxist effective systems of helping people to communicate, but, are we using them? I maintain that we are not, and that, because we are not, the increase of data availability brought by microtechnology

Liveware File

AMAZING WHAT TURNS

OH, YERY NICE -AN ORIGINAL

PAYROLL PROGRAM FOR.

AN IBM 360/30 ...

UP AT THESE ...

rate at which our culture becomes nuire harbaric. The golden rule is "more means worse."

If your average input of new concepts is 10 per day, what will you do when you're getting 500? And how will you decide which of those 500 is the key one that you need? If you've been taught the skills of such decision, you are a ture man - and an increasingly race apecimen.

I am not in the business of doon-mongering. Indeed, with considerable help from my friends, I have been responsible for the upcoming TEACH (Technology, Education and Change) Prestel inap of microtechnology education in London - wluch, os far as I can British education ever, let alone

the first real time one.

I think this will defend me sgainst charges of Ludditism. But I must give it as my considered opinion that unless the skills of and applied in the very near future then the story of the Tower of Babel will recapitulate around us the only difference being that we shall be buried, not in bricks but in irrelevant data

TEACH

GEORGE HAY General Secretary

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The court of King Clive

the personal computer pioneer.
How right that is! Recently I heard Sinclair address a group of sympathetic but thirsting hacks about his new ZX Spectrum per-

Usually these computer Press gatherings are purgatories of puff and platitude from which we are eventually granted freedom of the

Rounding up?

THE long-awaited (to journalists everything just released is long-awaited) White Paper proposing data protection legislation can be had from Her Majesty's Stationery Office for a modest \$2.30 A identified world, one would have thought.

But shreddings can sometimes be pieced together, and not every office has an incinerator handy.

A company has therefore filled what it thinks is a genuine need by bringing out a disintegrator which it claims will reduce paper to "micro-confetti." This requires no burning and is impossible to reconstruct.

data protection legislation can be had from Her Majesty's Stationery Office for a modest £2.30. A light ning mental calculation reveals that, at the exchange rate prevalent at time of going to press the US equivalent is \$4.14.

What on earth then is the Wasbington Privacy Journal doing offering its readers this same White Paper for \$10?

A ghost in the machine

scrap heap when a race of rats takes up residence in the entrails

IS there life in a computer? We at Computer Weekly waste no time on such pedantic considerations, but some prople believe there is.

For example, the larger of Is. on such pedantic considerations, but some prople believe there is.

For example the launch of Information Technology Year in Walea was celebrated by a competition for children under aleven to

once peopled by live wires.

At this point the computer exclaims with pain, demonstrating written by a boy called Ranjit death.

Singh Samra. His delightful little.

Conquescar in pace. that not only was there life within

YOU have to stand head and cocktail cabinet. This was not the sholders above the field to peep case with Sinclair in the throne.

A mesmerised audience heard Such is the giat of an advertisement in the Sunday Timea for a chief engineer to work alongside him deliver his usus! raw rhctoric, and eloquence. No one present was left in any doubt that this man

At the end there was a momen of silence. But the electricity in the air conveyed to us all that n miracle had been performed. It had to come. A thunder clap of applause broke as we all flung aside journalistic propriety and shared a glori-ous occasion of Sinclair magic.

This adds up to trouble

At least this would be the case in an ideal world. The atate of Kansas, it seems, is far from the ideal. There it is possible for up to 315 licence plates to bear the same alphanumeric combination — with a resulting high number of arro-

This preposterous state of affairs

number may be issued to each of three types of vehicle: car, truck and motor cycle.

neous detections and mistaken identities.

arises because each county in Kan-ass can issue personalised number plates independently of the other counties. There are 105 counties, and

within each county, the same

That makes, I believe, 315 possible combinations, and very troubled lives for the computer operators at the FBI's National Crime Information Centre.

tion, stepping through the meshow how easy it is for the est. get to what be wants to do L'2 months the menus get in the T A typical routine daily operativistic require responses of sales

and E to a series of arrent to have long-forgotten meaning.
The user knows this sequence. If he or she is impaient in presses a key before the comparing ready that entry may not accepted, the next entry it paid accepted, the next entry it paid

tip and then the users are high bad day lost in a maze of screet.

A real user-friendly system had day lost in a mac.

A real user-friendly system would recognise the five charge entry sequence for what it is, in human being looking ahead. It human being looking ahead. It system could omit the displayable were unnecessary and go decided to the operator's usual pact work for the daily operation.

Better still, why not pace operators to give their own moric names to those places in menu hierarcby that are used to larly.

All systems should recognition that the needs of the experience user are not the same as their the neophyte;

Gliff Dillator

as discs are concerned.

January this year.

or those 3033 users who have ordered 3380s. But then that could be just what IBM wants. The carrot

It could now be that the atick is a restriction on the supply of high performance peripherals.

1984 and all that . . .

THIS week's example of the strange things people say about computers was sent in by C. C. Leighton of Carahalton, Surrey, who wins £5.

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of \$130 each (£150 U-motte)



No foolproof security procedum

ness and uncertainty, coupled with the fact that most DP Managers are perpetually behind schedule, means that when it comes to prio-rities security gets short shrift." rities security gets short shrift.

So said Alan Smith, a speaker at Compacs '82, aixth of the annual forums on computer audit, control and security organised by the Institute of Internal Auditors. Smith is Head of Management Services at Tootal and is also on the board of the NCC, where his special interest is all aspects of

computer security.

He believes that computers are a means to an end, and that the emphasis in contingency planning should be placed on the systems, of which the computer is but a component, rather than on the physical integrity of the hardware,

"SECURITY is the antidote to nasty events that are not certain to happen. The combination of asstisystem will remain. tions that either stop or reduce the chance of a peril striking at one of

the component parts of the

system," he says.

But he claims that this first line

is deficient io at least three major areas. Firstly, no defence is fool-

some degree. For example, some access prevention systems involve

cumbersome card keys or numeric

keypads which are so inconvenient

in practice that the doors the

system is designed to protect are frequently wedged open so staff

can get on with their jobs without

But the most critical shortcom-

ing of first line defence is that, no

being hindered.

For these reasons, a second line of defence is required for a procedure to follow should something untoward occur. Some problems are best left to the second line defence rather than attempt impossible expensive preventive mesproof and many precautions contain a fallible human ingredient. Secondly, most precautionary measures involve compromise to

While sophisticated uninterruptible power supplies can pro-vide unbroken service in the event of a power cut, their cost and bulk often cannot be justified in a commercial environment Simpler, cheaper standby gener-

ators are usually adequate for most sites. That is, don't bother trying to prevent power failures; simply plan for alternative arrangements should one occur. Similarly, while it would be desirable to be 100% certain that your systems are errormatter how competent the person free, the manpower and time re-

extremely expensive.

Better to have skilled and able to handle any fabril to

they occut. But, says Smith, there is ways be some risks that a prove so traumatic should come to fruition the mean first line, preventive manger

WHEN a company puts all its eggs in ooe basket and then wins Outen's Industry Awards for Export Achievement, two years runaing I conclude that the basket and the basket and the basket and the basket are supported by the stone. Or perhaps the stone of t aing I conclude that the basket amust be strong. Or perhaps the eggs are unbreakable.

I refer to BIS Software of Londan I refer to BIS Softwa Fires, floods sad english damage all come into this cap & The severe upheavalt of terruptions caused by side den, which owes much of its suc-dent, which owes much of its suc-dent of its Midss banking package, Midss was written on the makes their preventier; It is far easier to end in

be discovered when the many workload falls in a heap.

Another problem with ar.

standby arrangement of the overlooked question of the the surviving machine of the capable of ruosing liter

workload in addition to the fa demised sibling. Could was

run with double the werker

return to normal working is

long that the degrated v.

available with the first by di

back can no longer be toka: time frame three is entered it

will usually mean that the icalition is completely destroyed.

users regarding the level of re-

dors, manufacturen are ser

ingly fast to respond to 1 pm.

They will usually be she up

are

/ Manufacturen

surprisingly fast

to respond to a

one of their

customers.

plea for help from

Despite the general cynics.

den, which owes much of its suc-cess to its Midss banking package, responsible for nearly 70 per cent of total revenue. Kathy Hasking leads the BIS Software program-rons, and as a result is completely defences than to detail to miog learn and has overseen the menu driven, with extensive that access control and fire tion companies provide 102 design of Midas since 1977. Pot her I have a few questions package ready to bolt on the installation. No real and tripping off my tongue. Like why do so many banks buy Midas? involved; just capital expert Becsuse it hit the market just as backing was becoming more inter-national, when for example cur-rencies were floated for the first support for RPG that the IBM

time. "One German bank lost £10 System 34 was chosen for the million oo foreign exchange shout this time," says Haskins. Mides calered for floating cur-1eocies, incorporating programs to control profit and loss from BIS Software - the operating

national, when for example cur-rencies were floated for the first

switching between them. Flexibility is another key to the success of Midas, according to das. Ilaskins. Banks do not conform to T

pany Softech, which has therefore ready. Lunched an Ada-Pascal tronslator The

reliable Ada compilers are avait-able, and meanwhile want ro learn

The specire of security sny standard in their use of figures breakdown drives the whole Midas

checking of data as it is input from

keyboard. For this it is written in RPG II, which handles record locking well. "RPG is optimised for this, while Cobol is far less

sysicm - apart from the fact that

IBM has a stranglehold on the banking system market anyway.

IBM has another advantage for

system has its own password secur-

ity which is quite sdequate for Mi-

Golden eggs put all in one

basket - the Midas touch

Speeding along the Ada rush . . .

At least so believes the US com- versity for example, but few are Lunched an Ada-Pascal tronslator The translator, which costs reviously used for developing \$4,000, can be used to write in Ada for Ada developments in the UK Ada compilers.

According to Softech coosultant
Peter Yeomans, many companies

According to Softech coosultant
guage than Pascal, there are limiguage than pascal, there are limiguage than pascal, there are limiwant to get off the mark as soon as tations. Softech bas however premises.

Meanwhile changes are suit tak-

PROGRAMMERS everywhere are sent there are many Ada compilers itching to get their hands on Ada. under development, at York Uniing place in the language definition of Ada, so the final version is yet

system checks that sufficient funds are available and then performs the Security can be threatened if one

person attempts a drawdown followed nanoseconds later by another on the same account. Suppose there is eaough money in the account for either one or other of the withdrawals but not enough for both. It is then possible for both transactions to be given the go-ahead at the checking stage. If both are completed, the account will be overdrawn unless some other action is taken.

One solution is to keep the record locked until the transaction is completed, but this will slow up the processing. BIS found a better solution for Midas: a log is kept of record accesses. Then if it turns out at the transaction stage that money has been withdrawn since the inicheck was done, the transaction can be rejected.

installation?

when we take Midas into another as Japan. The problem there is that some types of yen loans accrue interest on the first and tast day of the period rather than just on one or the other as in the industrial Occident. This nearly caught BIS Software asleep.

Other little niggles arise from time to time, like different ways of collecting fees.

Another problem that cropped

up in the UK is that while interest raies are high, the profit margins of banks are squeezed by their having to compete extra hard to lend money. Therefore they lend at money market rates, which is close to the minimum tending rate. In fatter times, they lend at two points over hase. "We have to be continually on the ball for new ways of gesting these fees into the system," says BIS Software devetopment director Malcolm

Wright.

The tast of my catalogue of snakes was stepped over by Midas last October when all the New York clearing banks changed their systems. BIS had anticipated this and inserted a date flag into the

system to effect the necessary changes without a hiceup, when the time came. It just remains to indicate where Midas is going next. One possible new application for Midas ties in the new London market of finan-

cist futures.

future commodities, such as cocoa, ing high on the futures market, that are not yet available and do someone with a warehouse full nm yet have to he paid for in full. At the same time they are likely to change in value at a similar rate to something in the real live market, sn cuable stock market punters to

hedge their investments. They also Financial futures are the City's equivalent of taying off bers to the bookmaker. They are options on

might be tempted to wait before

with the futures market requires careful thought and BIS Software is not willing to invest in one unless it is sure the banks will buy it. At present it is soliciting banking

Disaster waits for no man - so contingency planning, although often time-consuming, should be a priority

tance, and that the company will fold should their listings be balf an hour late arriving on their desks.

The time-consuming, boring legwork required for someone to discover which systems are truly company critical can be off-putting, resulting in the standby plan being left until the person respons-ible "has time to do it". Unfortunately, a disaster waits for no man. It is no consolation to be told that the standby plan will be ready next

> 🖊 It is generally accepted that however detailed the standby plan, something will have been forgotten.

week if your premises have been reduced to a smoking ruin.

The introduction of gleaming new devices to prevent fires and unauthorised access is far more in-teresting and glamorous than plod-ding through long lists of computer systems and attempting to put some kind of relative priority on

Because of this many organisa-tions believe they have done all that is needed to secure their continued exiatence once they have installed the latest micto controlled gadgets available.

It is vital that the driving force

for the contingency plan is nt least board level. Otherwise, the plan will be at risk from both the parochial attitudes of individual managers and a lack of enthusiasm on the part of the person assigned the

Once the company-critical ystems have been identified, the following criteria should be judged. Is the system documentation adequate to permit someone who does not know the system at all to run it successfully? One should not assume that Fred who wrote it 10 years ago will still be around and able to resurrect it.

Is there a copy of the documen-tation held in an off-site location? Even the best documentation burns. Are there up-to-date copies of programs, JCL, and data? Are they stored in a secure location either a fire safe on-site or in a different building?

One manager of my acquaintance was unsure that the copies of critical files in the tape library, the second copies in the fire safes, and the additional tapes held at another office of the company were sufficient. Each week.

planning, there are no simple solutions, no quick and easy answers. Someone must work out exactly how critical the various systems If your site collapsed, would There is no point in asking individual departments to do this each area within the company will be equally sure that the systems run for them are of prime importance, and that the company will be would take a fourth copy of the category, put your money where frame two requires significant actualing for years, is no

he would take a fourth copy of the most important files home with him and keep them in his kitchen category, put your money where your mouth is and test your contingency plans — you will have

over the weekend.

It is hard to imagine that anything short of a global nuclear ho-locaust could interfere with such a belt, braces, piece of string, and superglue approach, but it is geo-erally accepted that bowever de-tailed the contingency plan, some-thing will have been forgotten.

Once you have checked these points, you should be in a position to say with some degree of confidence if the system is recoverable in the event of a total loss of the computer and the building (what we termed the "747 falling on the

Boen the best documen

tingency plans - you will have forgotten something, and it is better to discover the omission before Alan Smith divides contingency

planning into two disparate func-tions - fallback and recovery. "Recovery is concerned with those actions that restore the user to normai operation," he says. "Recovery takes time - it may be a matter of seconds or it may be a matter of months. Fallback is concerned with those actions which take place

He divides the period following an interruption to a system into three time frames. Time frame one involves the user waiting for nor-

frame two requires significant ac-tions to be taken, while still assuming a reasonably prompt return to normal running; and time frame three covers periods which can no longer be deemed temporary the 747 has landed on the roof.

The actual duration of these three periods will vary with the application involved. The computer disappearing out from under you, five minutes before payroll is due to run, will place a high degree of urgency on the system, thus shortening time frame one.

But for some systems, this first phase may last for several days beduring this time interval." fore the survival of the company is called into question. One advan-tage of drawing up a contingency plan is that you may discover that

When some form of fallback be-

comes necessary, the system enters time frame two. The procedures used may range from a reversion to a manual system to the use of a duplicate hardware configuration at another site.

The usual arrangement for such standby is a reciprocal agreement with another organisation with similar hardware. One of the cheme's major drawbacks is the almost impossible task of maintaining the two installations in an identical state of modification, both hardware and systems soft-

Machines which are in theory

... or just telling us it's

vide machine resources H (C) their own sites, or even marreplacement bardware in 1 22 of days.
When Dennis Ferrant Me

ICL 2903 was destroyed by 5: 1980, ICL provided feriling 17 Manchester customer cont # 5 the most critical systems call a payroll. Another 2901 was delivered to another sit, its work was continued and its placement computer room

placement computer to complete — more than a year to complete — more than a year to compute the complete — more than a year to compute the computer to computer the compute sion of replacement harden. enable the company to can almost as if nothing had beyond

There are concerns which vide complete environments conditioning, false floor, pr supplies and communic lines, either on their premises, or in Portakabin in can be delivered to the cast

It is also possible to set ups It is also possible to set us an environment know an environment know as "cold" standby centre for your company's use; but it is pense of such a constant usually precludes this is all usually precludes this is alternative is for several fine as a single cold centre.

In conclusion, Smith the "Systems designers mas fine couraged to incorporate and recovery procedures and recovery procedures and recovery procedures original system. Left to the several fine which are single to desire creasingly difficult to desire

and practise the language. At pre-There's only one

and only a restricted range of readers is eceive copies coming However, if you

If the contects of my massive postbag are indicative of the state of mind of the programming community, it is a wonder any decent witware gets written.

Perhaps the programmers who write to me take the opportunity of ketting their intellectual trousers down after a day of mental torture on the coding beoch. At least I hope that is the reason. Programmeta in the US now

have an outlet for their zanier thoughts io a forum for the free exchange of technical ideas called the Open Channel. Members of the US Computer page of ideas on any computer-re-lated topic to long as the laws of libel or the protocol of decency are

I have one such page before me which is full of glorious nonsense about the Ada language. It begins with the acute abservation: Ada is coming. It ends by qualifying this: coming. It ends by qualifying this: Ada is coming anyway. Ada is coming enyway.

PUZZLER I

A(B+C+D) = 288 B(A+C+D) = 228 (A+D)(B+C) = 448

All four integers used here are po-litive, and different. Can you iden-tify them before turning to page



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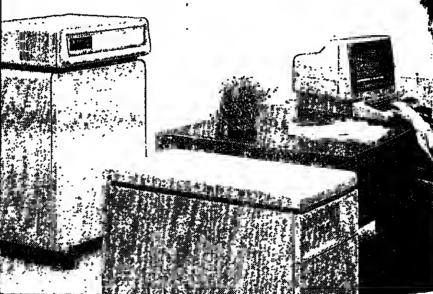
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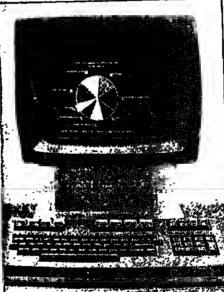
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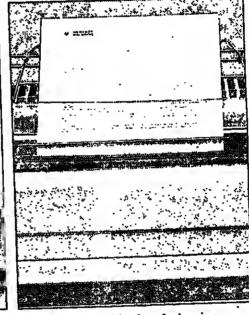
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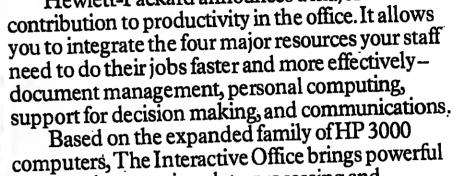
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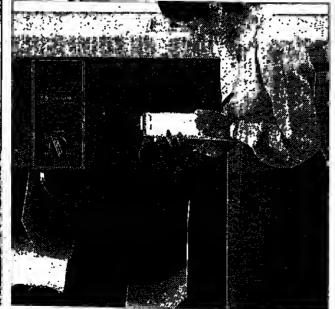


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PEOPLE I

Scan restructures board of directors

SCAN Data International and its main subsidiary Scan Computers has completed a reshuffle of senior diness for future growth, says staff, with Martin Baldwin moving up from the party chairman of Scan Data International and chairman of all the staff of the boards of Scan Computational and chairman of all the staff of the boards of Scan Computational and chairman of all the staff of the boards of Scan Computational and chairman of all the staff of the boards of Scan Computational and chairman of all the staff of the boards of Scan Computational and chairman of all the staff of the boards of Scan Computation and the staff of the boards of the boa staff, with Martin Baldwin

Replacing Baldwin at Scan Data is Steve Russell, formerly MD of Scan Computers. He also becomes managing director of the group and Scan Computer Supplies.

International. This appointment from Dalgety Spillers.

diness for future growth, says

ters and Scan Computer Supplie

NCR supports local community projects

commente projects fact compufer manufacturer NCR, as winners of the company's British Junior Chamber competition. Entries came in from the UK's 40 Chamservice to local secondary schools bera, suggesting projects that would benefit their local commu-

According to NCR many projects aimed to fill gaps left by gov- equip them for the increasingly

Northampton JC will spend its money aiming to make the public aware that most liquid medicines

Whose furnover from

to ICL users exceeded

£2 million in 1981?

Who has over sixty

programmers working exclusively on ICL tp

look after the iCL user

better than iCL Itseif?

Whose business is it to

Who is about to

system which will

revitalise ICL?

launch the software

the answer is -

Telecomputing

If you have any further questions and would like to know more about our launch presentations in London and

Manchester contact:

Lance Dorman (0865) 776688

TPS/TM which are so much more than to monitors TPS/VM

designers and

the supply of tp systems

Promotion also for customer support manager Barrie Coren, who becomes software director of

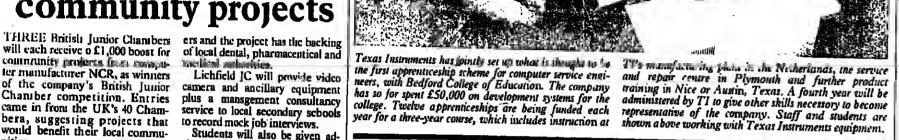
Scan Computers.

Mike Davey has been brought in from Data 100 to become sales Noel Atkins, sales director of Scan Computers has been made a full board director of Scan Data

This of Scan

Students will also be given ad-

ompetitive husiness of getting a



Whose TPS was

acquired by ten

more organisations in

March 1982 gione?

Vhose TPS is so far

established systems

Who should you talk to

if you want your users

to be online, on time.

ahead that users

regularly convert

vice in letter writing, form filling and interview behaviour to better tor of luformation Services and have been appointed managers at Equipment bas joined DM England as viewdata product manager.

Ipswich JC is to survey 5,000 | David Parsonage has been apaware that most liquid medicines are damaging to the teeth. They will campaign through the local media, posters, leaflets and stick
youngsters to its area on unemployment, leisure, authority and employment. The results will be computer anslysed and measured against local authority plans.

have been appointed managers at Osborne Computer Corp. Tobias, who is technical services manager. previously headed product support groups with ICL, CTL, and Delta Data Systema. Rubin, Oshorne's marketing manager, was formerly with software supplier Intelligence

o the board of CPU Computers, LSI's parent company. Blench is the executive in charge of LSI's computer systems and software de-

David Brown has joined Systems Resources as software product sales manager. He was formerly area sales manager at BOC Datasolve.

John Barnes has been named erritory sales manager, national Services. He was previously with AM Jaquard aystems.

John Ing has been promoted to manager of international opera-tions of Pertec International's peripheral division. He joined the company in 1980 and since last July has been district sales maniger, North Europe.

■ David Bone has been appointed production manager at Office Technology, OTL. He joins the ompany from Dicoll Electronics, here be was production manager. Grant McEwan has been ap-

pointed marketing services man-ager at Transdata. He was formerly an account executive at PR consultancy Blair Bowden Asso-

■ Jeff Nott has been appointed sales executive at Compact Ac-counting Services. He will sell applications software for accounting and invoicing and the company's Compacataprint costing and esti-

Consultancy

A NEW computer consultancy has been formed by City of London chartered accountants Hacker Young and computer services organisation the Fraser Williams Group. The company will operate under the unsurprising name Hacker Young Fraser Williams Fraser Williams offices in this country and in the US and Canada. Executive directors are Manager for new

THE applications department the Electronics (UK) formals wards the end of last year, Last manager. He is Bob Lind, he merly a project leader with the coni Space and Defeace is He Scotland.

Laird's career in applicate began in 1967 when be joined to National Engineering Laborn at East Kilbride at actains a sistant. He stayed until 1971 in g become higher actains officer.

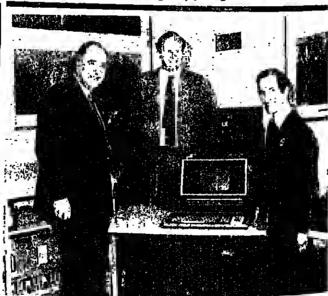
begged and as yet unanswered:
why did it not produce a mschine
which could run IB M software?
IBM has such a vsst stock of He then joined Burnutt systems designer, going on the come senior systems engont in 1977, following the achievement an MSc in digital system that software all around the world that it seems strange that it did not attempt to capitalise on that base part-time study at Smalling University, he was promoted section head. In this post hese in some way. For some reason, IBM chose the Intel processor and responsible for the design of to therefore the software that autopheral control systems and and matically followed such a choice. The next question, and possibly

He joined Marconi in bit where as project feader here lavolved with simulation usaand automatic test equipment

Transfer

FORMER senior director of Ga puter Resources Tony Richardy David Hillia has joined Jarman Systems as sales manager from United Computing's UK over Burroughs, where he was territory tion. The company recent a quired the business interest de professional services and solver Ian Williams is the new products divisions former national sales manager for Autooperated by Computer Resease matic Revenue Controls. Also joining the company is Peter Morri-

The two divisions will be mus sey, who becomes access control a sister company to Unit and security division manager. puting's bureau services.



When Wealden Computer Services replaced its seven-year-old ICL 1903 123 an IBM System 34, it decided to give away the old machine to chaims BE Bechanic (1965). Becker's (left) old school. The boys of Shrewsbury School installed the competer themselves, which was donoted complete with disc drivet, screen and it lpm printer. David Beatton (centre), monaging director of Weelden, hippersent the machine to the school's computer department head, Gilbet Reserve.

DIARY

Ambiguities in machine translation by Peter Wheeler of the EEC. BCS Natural Language Translation Specialist Group. King's College, Strand, London. 6.00.

manager in the London area.

MAY 17 Recent developments in crypto-graphy by Dr Donald Davies of the National Physical Laboratory.
BCS Technology of Software Protection Group. BCS Headquarters,
Mansfield Street, London. 6.30.
Details Simon Elsom (021) 3599
3661 eer 735

MAY 19 Ron Adam from British Telecom on the first year's experience running SwitchStream 1 packet switched service. BCS Data Comms Specialist Group. BCS Headquarters. 6,00. Details Peter Radford on 01-636 5440 ext 205.

Arthur Harverd, a partner in Hacker Young, and Ian Gold a director of Fraser Williams (London).

AGM and computer archive films. BCS Coventry branch. Physics Lecture Theatre, University of Warwick, Gibbet Hill Road, Coventry. 7.30

MAY 21

Teaching programming in Teachi

AGM, BCS South Beser braish Access Sports and Social Coals.

Sea. 7.45.
AGM followed by 1982 - la formation Technology Year by 1 Firnberg, deputy presiden ES. BCS Leeds and District brank Parkway Hotel, Leeds. 6.30.
AGM and Presidential with DCS Central London RS. headquarters, Mansfield Succ.

AGM followed by Micro april AGM followed by Micro and cations, by Rex Ingram of Leans BCS South Yorks Branch. Applied Science Block, University of Sheffield. 7.20.

AGM followed by the University Project at Rutherford Applied Project at Rutherford Applied Laboratory. BCS West Hettle branch. The Culpin Room, the Pavillon, Hemel Hempsteel.

NOW that IBM has devated the personal computer business into the "real" world of computing by in both component and system

It's time to ask IBM

question or two

a personal

opting to produce such a personal machine itself, a question remains

The company's

choices for

the personal

were almost

form. The industry, even though it

is only a few years old, has alresdy

started to develop its own de facto

meant at least tacit scknowledge-

aceld have broken too many rules

at one time and discouraged too

processes, IBM is certainly espable

made for it

computer

In terms of hardware, 1BM could do it.

There is, however, one slight proviso on the subject of the practicalities of software and, more specifically, operating systems. Not unnaturally, there is a strong big-systems bias in this particular area, and that means big hardware systems have to be considered to complement it.

Now, there have been great the more interesting one, is strides made in the technology of whether the current choice precludes any alternative de-velopments in the foreseable but the requirements of some IBM operating systems - MVS for future. In other words, could IBM example - make them seen insigactually go ahead and produce a nificant. Such operating system desk-top 360/370 type machine and make it work, and would it be require megabytes of memory just for themselves, on top of which must then come allocations for the worth its while to try?

The choices behind the design and configuration of the IBM Pervork space.

sonal Computer have been res-tricted hy both the company's and There are, of course, ways round this problem, in theory at least. One of those is networking the industry's history.

IBM had never dabbled in the and this is an area where IBM has a world of high-volume, low-value sirong presence. Unfortunately especially where the means of arena with Systems Network listribution is in such an alien Architecture (SNA), which has been around for several years now. In addition, the company has the 5280 system, which to some extent

> 360/370 type of desk-top system. SNA, however, is an architecture that is not only designed on a grand scale, it operates on one as well. It is not suitable for use in the local oetworking context of a col-lection of linked desk-top computers. IBM does not have an announced product in the area of Local Area Networks, and in accordance with its normal policy declines to speculate on who

looks like a forcrunner of the

ment by IBM of such items as the CP:M operating system.
The company's choices for the night come in the future. Though some announcement i certain to come from the companin this area at some time, it is likely personal computer were therefore almost made for it. There was a that it will have little application to the idea of linked 360/370-type need for s system that would be an attractive sell through the existing distribution networks, and which machines running some form o dispersed large system architecture dhered to the prevalent trends. or operating system.

Though it is possible, therefore For IBM to have come on strong with s 360/370 type of machine

for a desk-top 360/370 type of machine - up to a point - there seems little long-term validity in the suggestion that it should.

But should IBM actually conand indeed, is such a move a practical possibility?

It is one thing to produce the hardware that can run the requisite instruction set, which means the As one of the biggest manufac- the software can also be run. It is turers of semiconductor devices in another thing to attempt to realise the world (if not the biggest), and in hardware the necessarily comwith one of the most comprehensi- plex architecture of those big vely advanced manufacturios systems.

processes, IBM is certainly espable of producing the microelectronic building blocks it requires for such a machine. Indeed, some two years sgo, the company demonstrated this specific capability by manufacturing an experimental circuit that continue the administrative to a 360 machine on a single chip.

This was produced using the company's then latest product devices. Allowing considerable flexibility in both circuit design and complexity, this family of arrays is at the heart of the majority of IBM's newest system products.

Two important factors are therefore proved. Firstly, the company has the design capability to realise a suitable processor—certainly as a chip set if not a single instruction set and provide the relevant relevant relevant of products.

There is however, one final assupplications software that already exists, and will exist in the future. Though much of it is oriented to the big systems.

It could be done, and it could be done in a more compact form than in the originals, but auch machines would make such a product attractive, and they would almost certainly still be very expensive.

"It would be ike trying to run a long distance bus service with a fieet of Minis; possible, but hardly sensible."

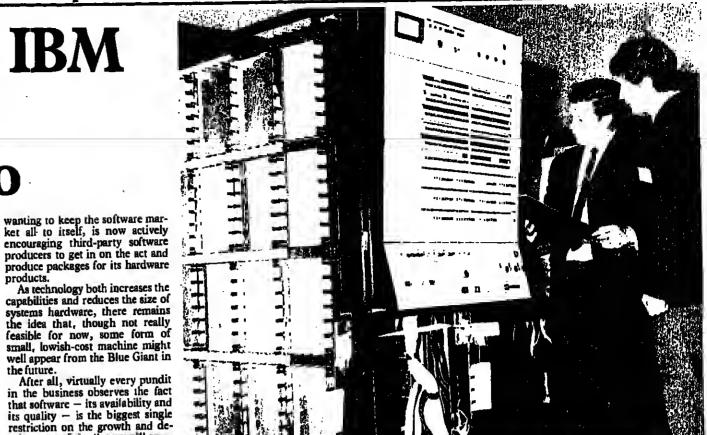
There is however, one final assupplications software that already exists, and will exist in the future. Though much of it is oriented to the big systems.

Though much of it is oriented to the big systems.

Though much of it is oriented to sample banking or EFT systems—there is much that has been produced by DP departments for smaller applications. There are many stand-alone programs that could find a market outside the originaling company.

The again there are the pack-area of the produced by DP departments for smaller applications are the produced by DP departments for smaller applications. There are many stand-alone programs that could find a market outside the original produced. If the produced by DP departments for smaller applications. It could be done, and it could be

instruction set and provide the relevant power. Secondly, such a ged products. IBM, far from





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ROHAN COMPUTING LIMITED, 52 Covenity Street, Southarn, Waitylckshire, Tel. (092681) 4 16.

Selected by Maggie McLenin Keeping track of microsoftware

THIS directory is a brave attempt to tackle a task which is almost impossible. The speed ar which e micro industry moves means that there are products almost certainly missed out, or some listed

fhe international scope of the directory will make the job of keeping it up to date even more fearsonne. There is a danger uf spreading the net too wide sud saying too little about too much.

Having sounded those caveats, there is a sore need for a reference Anyone wanting the full picture quality control in the form of de-

by software liouse/publisher.
The sections are sensibly arcach program by name.
There is a clear flowchart at the ranged to ester for the whole range of micro users: those who stready have a machine; those who are start on using the book, an excellent list of checkpoints and questions for the user to bear in mind keeping su open mind and want to start with a particular spplication which may dictate the hardware, and those who know the scene and and the scene and an articular scene and the scene and an articular scene and the scene and an articular scene and the scene and the scene and an articular scene and the scene and articular scene articular scen want the goods of a particular soft-ware house. Sary of terms. The publisher promises some

The International Microcomputer Software Directory. Imprint Software Ltd. Edited by John Graham and Roy Wyand.

THIS directory is a horse attenual.

The products are listed in three supports and the product are listed in three supports and office supports are listed in three supports are listed in three supports and office supports are listed in three supports are listed in three supports and office supports are listed in three supports and office supports are listed in three supports are listed in three supports and office supports are listed in three supports and office supports are listed in three supports and of the first two sections, where the various groups are listed in price order, using the listed in three supports are listed in three supports. The products are listed in three number given to each product by ters, and offers further extension sections, by target machine, appli- imprint Software. In addition of the directory cation, and (in most detailed form) there is an index at the back listing online database. of the directory in the furm of an

usage largely on its signpostings. The sections are not clearly iden-

A colloquial approach to the use of Pascal

Programming Concepts — A Second Course with Examples in Pascal. William B. Jones. Prentice Hall.

THIS is an undergraduate text whose three-fold goals are an introduction but assuming duction to the fundamental algorithms all programmers should know, standard techniques of program construction and analysis

Concludes with programming algorithms and programs are developed.

Subsequent chapters introduce data structure requirements involving stacks, queues in liocar and linked representations and linked representations and tree structures by using a series of programming, introduces top-program construction and analysis

Chapter two defines structured programs involving searching, sorting, Polish notation and recursion.

Relational

Databases are

and simple to use.

They reduce costs

Tor Database users

and administrators.

They are simple to restructure to meet

easy to understand

program construction and analysis down design and Pascal processary features of Pascal to express those styles which reasonable problems for which illustrative programs and

System.

installations

In Industry,

Government

and Research

on over 20

of Majultames

A version is

for micro

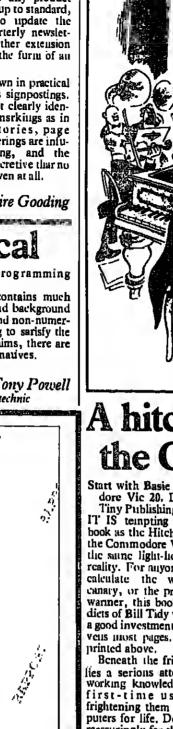
different ranges

and minicomputers.

isnow

available offering

many extra



A hitch-hiker's guide to the Commodore Vic?

the Commodore Vic, as it projects useful programs for the "to the Commodore Vic, as it projects
the same light-hearted air of minreality. For anyone who wishes to
calculate the weight of their
canary, or the price of a bunantiwarner, this book is a must. Adwarner, this book is a must. Addiets of Bill Tidy would also find it a good investment as his work enlivens most pages. A sample is re-

Beneath the frivolity, however, lies a serious attempt to insul a working knowledge of Basic into first-time users without rightening them away from com-puters for life. Don Monto writes eassuringly for the hapless beginner, encouraging experiments which will obviously lead to disaster as a way of giving confidence hy showing how they can be reme-

Start with Basic on the Commodore Vic 20. Don Monro. The Tiny Publishing Company.

IT IS tempting to describe this book as the Hitch-hiker's guide to the Commodore Vic as it projects.

As you might expect five book which shows calculated the control of the Commodore Vic as it projects.

gest off-beat programs, Sua Fi-series using the POKE committions are given to create a Re-Augela niotorcycle tor, whistles and to make the Vice

I'm uses of such facilities debatable, but this and later it. ters on inventing iostruction subroutines help the author users to make the most of the

Ins and outs of buying a word processor

Choosing and Using a Word
Processor. Kevin and Kate
Townsend. Gower Publishing
Co. 612 50

WITH word processing being widely tipped as being the fastcat growth area of electronic office products, the publication of Kevin and Kate Townsend's Choosing and Using a Word Processor is a matter of a Word Processor is a word Processor is a matter of a Word Processor is a word Processor matter of considerable interest. background, and Wang - 1500 Along with Keith Wharton, the Townsenda are probably recognised as being the months of the state tive commentators and writers on word processing in Europe.

Basic word processing systems, as the book makes clear, were in-troduced by IBM in 1964, Succes-sive developments include the introduction of floppy disca, daiaywheel printers, visual display unita, vastly improved anothera and the inevitable silicon chip.

Essentially this is a practical book, covering the understanding, selection, use and financing of WP equipment and systems, and can be equally recommended for the WP novice or the professional user. Unfortunately, the book does teod to lean over backwards to be

But although best buya are not featured, it is possible to read beween the lines. Certain suppliers, for instance, who did not respond to the authors' request for in-formation are named. This black Hempstead, price £11.95.

is paid to training, spart from sal ing that operators at couraged to attend official minit courses and that the manage a aupervisor should be sent on 1 %?

appreciation session. When it comes to environmen conditions, the authors oreign the noise problem associated and Backing the book le a delight series of drawings - this is of creative area in which the wood

not (as yet) compete. Alan Simpor

Pascal handbook IN the April 8 issue we published review of The UCSD Parel Handbook, by Randy Clark and Handbook, by Randy Clark and Stephen Koehler; This book a svailable in the UK from Presur Hall International at Henry Hall International price £11.95. FRANCI?'S software industry is booming. Over the past five years it has been steadily developing at an annual growth rate of 25%.

Current tunover is close to \$2 billion of which can be installed and put into operation in under 24 hours, says the company.

Cap-Gemini-Sogeu is another aggressive and enterprising softnggressive and enterprising soft-ware firm which won its spurs in setting up the French Telecom Authority's Telematics Centre at Rennes, Brittany. Ir played a major role in launching the local

French revolution

lion, of which one dollar in five is French software producers'

in software

tevenue now ranks second only to test in thia area of the electronic United States. And even across the Atlantic more and more new customers are turning to the French. telephone directory which is soon to be given trials in other parts of In spite of the economic recession and the surrounding environ-

ment of contracting workforcea, French software makers have created 17,000 new jobs since

which has been ruling France for the past year is well aware of the software profession's value to an economy which remaios sluggish in spite of the hopes set on nationalization. Premier Pierre Mauroy said recently: "The new French Revolution now being conducted."

Alsys, Ichthah's software firm near Paris, is working with the Pentagon over transatlantic data links on Ada's final language standards.

The firm offers four versions of Multitel. These are designed to run on hardware from IBM, CII. Honeywell Bull and Intertectional dards.

France's leading banks and mediant profit in the pentagon over transatlantic data links on Ada's final language standards. shation Premier Pierre Mauroy and recently: "The new French Revolution now being conducted by our computer software firms will shape the France of tomor-

ing, who kunched France's first



D'ESTAING . . . Sponsored ambi-

Plan in 1976, had already given the software industry a major boost by sponsoring such ambitious pro-

become so international

Steria calls ita videotex packsge much of France's software re Videnac. Basically, it performs the function of Prestel's Gateway, National Telecommunications Rehandling calls from subscribers aearch Centre. and connecting them to the appro-friale privately-run computers to access the same of software development range of software development access the services they select from the index pages. The Videopac tools which are now being offered tools which are now being transfer. centre manages databases, handles to Freoch industry for transfor indiscribers' requesta and mation into commercial producta. processes and records all the

market opening up for local privale networks.

To provide customers with the world ailor-made systems, Steria has ser up s software workshop. This can deliver a made-to-measure version

Cap-Gemini also conducted the marketing aurvey for the Télétel trial near Paria. It acils its professional videotex software under the brand name Multitel, handling

mingly superior to equivalent teleprocessing networks because of its cherpness. The small black and-white Minitel terminals which French manufacturers have built for the electronic directory project cost only \$100. They also work perfectly for all other videotex ap-

The French are following the example of the weathermen in labelling hurricanes, by using women's first names to identify software services specially designed for municipalities and farming communities. Claire, the Dauphine Alps, has been followed by a more recem system enlled Sophie.
Buth have resulted from n part

ncrship between CII-Honeywel Bull and G.CAM, a subsidiary o Caisse des Dépôts et des Consigna tions, a state-owned financial body which provides funds to help von

tures sponsored by the govern-ment and local authoriues. Sophie, which runs on a mini, is designed for operation by local government employees to provide the public with information about facilities ranging from health and housing services to entertainment. The French Telecom Authority expects about 50 videotex ventures housing such ambitious proitems as Transpac, the public packet-switched data transmission network, and the trial in a Paria suburban community of Télétel, the interactive videotex system.

It is oow three years since the contract for this test, which involves 2,200 homes in the Versailles area, was awarded by the sailles area.

French Telecommunicationa Authority to the Steria company. Steria immediately recognised than it could apply the experience which it obtained from Télétel to become ao international Teletel to become ao international market because of its mitty with the national regulations

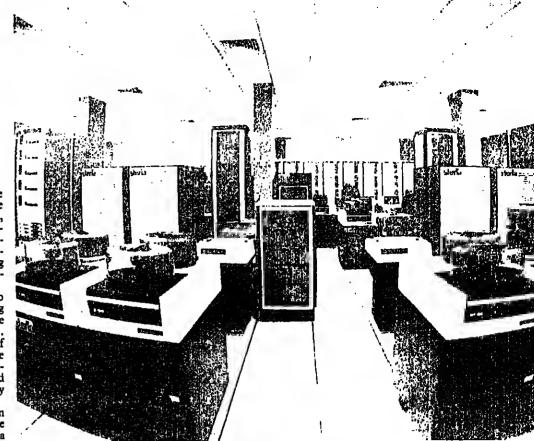
The Narional Telecommunitransactional operations which cations Research Centre acquired much of its experience in software The company does not regard videotex primarily as a public ser-rice dependent on orders from Telecom authorities. It sees a vast market poening to for local with the company does not regard creation and maintenance when it developed the ambitious applications software for the digital telephone exchanges which France's and Thomson-CSF phone exchanges which France's CIT-Alcatel and Thomson-CSF are selling so auccessfully all over

French Telecom is now working hard on research into artificial in telligence. The practical benefits

will shape tomorrow enquiries from subscribers will increase both in scale and complexity. Sn there will be vast opportu-nities for an automatic fact-finding Artificial intelligence has also

been a major concern in solving the problems linked to the A spectacular example of

France's auccess in the software field is Ada, a programming lan-guage designed for the United States Department of Defence by compoter scientist Jean Ichbinh.



Veliay data processing centre, heart of the Paris viewdata experimen

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SYSTEMS ARCHITECTS.



of effort has been put into trying to divine how the world is going to be changed by the wonders of microelectronics. Sadly, all this work
has achieved little more than the

using information networks as month in the anti-IT Year film
control mechanisms."

produced by Education Media.

But how would they do this? He electronics. Sadly, all this work has achieved little more than the labours of all the augurs from Delibhi to the makers of horoscope calculators.

control mechanisms."

But how would they do this? He does not say, nor does he show how self-realisation would become calculators.

possible futures resulting from the new technology, all extremes in one way or the other. One set of voices tells us we could have a of time is only a minor part of it, future of leisure and self-fulfilment. Another set tells us that we will all live in grinding poverty,

different from the world as it is at present. How, in detail, could they actually come about? Exactly what steps would history have to follow

for these things to happen?
We are not told. Indeed, careful thought about the matter leads us to wonder whether there is in reality any way in which these futures ould come to pass.

The latest prestigious body to indulge in electronic crystal-ball-gazing is the Club of Rome. At its meeting last month Adam Schaff, the Polish Markiat philosopher, as-serted that the future with microelectronies would be either Paradise or Hell, but he declined to say what this Paradise or this Hell would actually consist of. Could this be because these

We in the West tend to regard Japan as a country where they do not fret about the microelectron future, but instead just go ahead and build it, much to the detriment of our own economies. However, there is some soothsaying going on there too, most notably by the academic and system designer Yoneji Masuda in his book The Information Society as Post-Industrial Society.

He too describes two possible futures, one in which every individual will have the opportunity of 'self-realisation" and in which 'synergy" will abound like some updated aecular version of the Holy Spirit. ,

Masuda's other future he calls The Managed Society, in which "ruling elites would guide the "ruling elites would guide the managed (persons and things), The diversity and "modularity" of microelectronics will prevent anyone acquiring a monopoly on it.:

SINCE pre-history the human race has spent a great deal of time and effort trying to predict the future. The stars have been surveyed, palms read, the insides of dead animals probed, and tea leaves pondered, all. with results that have not improveded the more have not impressed the more rational among us. More recently, apecifically over the last five years or so, a great deal of effort has been put into trying to

so much more attainable in his hands and no money.

people have with finding fulfilment at present, one sees that lack and increased ability to handle in-

Thia overlooks a fundamental characteristic of microelectronics which makes it quite impracticable

except for a few clever people who will be immensely rich but prethe future is that those who understands it all. Each person understands it all. Each person understands it all. Each person understand the new technology will business, and is totally dependent grow enormously rich, while on the support of others to keep

munications specialists, or

In addition, the "module" which one person knows can be fairly small, so it is possible for instance to provide unqualified, disadvantaged youths with saleable akills in the business. If a technical expert is getting paid over the odda for his services, there is nothing to And changes in the technology are making this easier all the time. The other dubious aspect of this

vision of doom is purely economic. There is no way in which there

cians, system software people, ap- producing things, leaving cause then there would be no-one buy the goods from the rich and

Even if industrialists were cap-able of forcing the mass of the population out of the economic system, such an exercise would be aelf defeating, as illustrated by the reported interchange between the boss of General Motora and the head of the car workers' union at the opening of an assembly line

Smugly the company president asked, "How will you organise these?" Replied the union man, "How will you sell them motor cars?"

objectives (assuming mark)
objectives have been stepped
drawn)? Only one will, so let
there is no real choice either.
On examining the result of eslier forecasts of the future, occilier forecasts of the future, occitempted to conclude that all pronostications are donned to fair. The future is nearly always there

One example of a Hell that has bear examination is the state lishment of tyrannical pourment, using new technology; belp its repression. This days has been cited by no less a fig. a

It is not, however, a manaissue: it is a political our Tyrannies have always managed the past without technology El

we can only guard against the recurrence with our eniting

Throughout the discussion

hear that mankind is ficed me

choices to do with the new test-

nology. But is it? There is note.

choice in whether we adopt to

technology or carry on der things less efficiently the otherwise for some outcome

human benefit. Humanity & 1

whole cannot benefit from war

although some particular gor-may. Change can be painful but a have no alternative than to fact a Similarly, those calling in

"human-centred" systems detrin which ostensibly the man des

the machine rather than vice were

ding is in the eating.

Which system design best full the objectives (assuming that it the objectives (assuming that it is the objectives).

processes of democracy.

he future is nearly always largery
y developmenta and inventor
hat were totally unexpected.
Look for instance at the gold
precasts produced in the 1960 to
the world'a best-known his
her world'a best-known his advent of urban terrorism might just as well have spent

time growing strawberries.
Still, considering the importance of microelectronics, period further attempts to forecast coal be worth the effort. Why be worth the effort was needed is a totally new approach one that is determined to del is tangibles, and is prepared to hele such thorny issues as the wind information, and how people is

information, and how, people quire their expectations.

Practitioners of the set in proach would have to be far held informed about technology has ready to assume that it can do not ready to assume that it can do not hing or has some sinister mind thing or has some sinister mind its own.

This way, and with same lists they might come up with same they might come up with same they might come up with same into obvious and that would are not obvious and that would all the same than the same than the same that the same than the same

Microcomputer education in Scotland has not lived up to its early promise. David Hearst reports on the reasons



"specialisms" at a time when ald

curriculum enrichers like music

queezed by the cuts.

programme and schools. The fuss that a Press leak created gave rise in the lower level, there are still only 22 items which the SMDP Teachers would not so much teach, as manage the machines which allowed the pupils to learn for themselves. with which the world of Scorush education is not totally unfamiliar.

What had gone wrong? From It was heady stuff. But few had any personal experience to draw on and the sales pitch of the mainly schools but quite another to incor-American systems designers fell on porate them properly into the cur-riculum. This needed highly fertile ground - not only in eduspecialised educational software

awareness courses and demonstra-

and its sims."

cational circles.

By the late Sevenues, when became clear that the collapse of our heavy industries was irreversi-The SMDP had no say in teacher training, but it had built up the impression that success lay in the number of machines it could ble, politicians were desperate for instant solutions. Nowhere more so than io Scotland, where maou-facturing industry in the West was distribute, not the use to which they were put. When teachers reshowing all the signa of being knocked for six by the recession. ported back that they had insuffi-The microelectrooic firms cient software, not enough prin-ters, and poor back-up from the

which set up in the East immediarely became Scotland's sunrise in-SMDP, the reaction was one of dustry, even though there were still many clouds about. Schools have always been seen At the heart of the trouble was the SMDP's own relationship with

rather glibly as the gateway to the future. In an effort to encourage the supply by creating the de-mand, government opted for speed rather than caution. Two mooths after a survey was

carried out on the use of microcomputera in Scottiab schools in September 1979, the Scottish Education Department the original intention. As the inde-pendent evaluator Phil Odor, (the equivalent of the Department of Education and Science) invited senior research fellow at Edin-burgb University, said in his reall schools and colleges to put in their claim for microelectronic hardware. Inveot a project, they were told, and we will lend you the port: "In retrospect, a better model would have been to provide

The response was overwhelming. They got bids for over £2 million worth of equipment in a programme that only had £320,000 to mend. Aicroelectronica Development

by April 1980 when the Scottish uniter for Education and Indusby Alex Fletcher announced in arliament a further £1 million to be spent over four years on the programme, the razzmatazz had

ecome overpowering.

A year later the SMDP's director David Walker could claim: the microelectronica scene in Scotland is truly dynamic. In November 1979 there were just over 100 microcomputer systems in Scottisb schools. Today, 17 mooths later, there are over 400.
Two regions have gone from a nominal involvement to 100% co-verage of their secondary schools."

Months later his deputy director had reagned. A preliminary report of an independent evaluator spoke of the lack of teacher training, the whose educational quality are than subject, programs that are which programs between the poor communications between the commu

considers "educationally valuable, adequately documented and technically competent." With only 17 full-time staff and a handful of technology, there is a growing hos-tility to the introduction of new programmers the upper level of the library is likely to stay that way

for some time to come. Then there are problems with machines, like the BBC computer. have begun to appear on the market, there are 14 different systems running in Scotush schools today.

managed to get four of the systems, Apple, Pet, 380Z and Cromemco 10 "talk" to one another but there is still a big problem with compatability. Even as it is, each system generates phics in a different way and at

schools. Although it described it-self as a "pump-priming agency atimulating developments in a that large sectors of Scottish edu-Scotland's largest region, Strath clyde, an authority with over hal selected group of projecta", it be-came clear that the programme of Scotland's pupils, has opted out of the SMDP altogether, preenough to be the focus of micro-electronic development in schools. ferring its own scheme and contain with the Department of Industri But that had undoubtedly been

> There are now aix other cent nuters in education, and although they profess to lisse, consult and observe as a matter of course, the SMDP is losing its place at the centre of the stage.

This is perhaps the worst effect of the last few months' problem for the programme, for although cannot be blamed for everythin "One benefit would have been that people would have been more informed in their arguments for correct configurations of money and resources went.
The SMDP had started two and

programs analogous to the ones the thing to a clean sheet that you are likely to find in Scottish education - isolated groups of enthusiasts scattered ground the land, with no-In other words it should have been people before machines rather than the other way round. one taking overall command.

The SMDP had an ideal opport

tunity to take the reins. But now that the Dol is about to announce the extension of its microcompute granta to primary schools, it is a matter of some doubt how useful the SMDP scheme will be to schools as the DoI's agent.

Primary schools are going to provide the hardest test. Wherea n secondary schools there were teachers who had used micros be fore an organised system of distri bution was set up, primaries are

COMPUTER WEEKLY, May 6, 1982

But the real job lies in retraining the workforce already out in the field, and here the SED and the colleges expect to get a tenth of the second of the sec colleges expect to get a tenth of the have expected an organised and co-

money they need.

After only three years one can
not expect miracles, say the
SMDP's officials. Obviously it will It is here that critics feel the SED made its biggest mistake. They feel that the push to introduce inicrocomputers in schools puters in schools will live up to the . The author is education corresponding

should have started in the teacher exaggerated claims that have been dent with The Scotsman.

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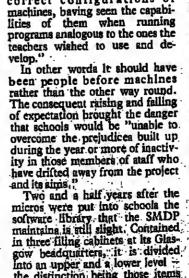
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Low-price lasers from H-P

PRODUCTS - 1

A LASER printing system from Hewlett-Packard is claimed to be the lowest-priced high-speed, off-line page print station, using plain paper on today's market. Priced at £101,760, the HP2685

system is built around the com-

puny's laser printer.

With larger quantities of text and business forms stored in its own memory, the print station can deliver finished, printed documents – including logos, forms, signatures, bar codes, and OCR characters – at 45 presents and its characters - at 45 pages per min-ute. It can do this at the same time

as it is being used to design forms and characters for new applications, says Hewlett-Packard.

HP says the new printer "is a capable, economical device for anyone who has more than one high-speed line printer. One high-speed line printer. One system with two HP2680 page The HP2685 print station in-printers could be expected to cludes an HP2680 laser printer, an printers could be expected to produce up to one and a balf million copies a month. If any user console, operating software, 65.6 Mbyte disc drive, 1600bpt tape more HP2685s could also provide drive, and a graphics terminal to cool and Forman, 8 1600/6250bpt and 8 1600/6250bpt and Forman, 8 1600/6250bpt and 8 1600/6250bpt an redundancy, for assured uptime. design the formals, logos, Yet the advantages of low cost typefaces and other print features.



Forms and characters may be de-signed interactively, online, then electronically stored and printed.

tion can be upgraded to distri-buted data octworking, and supports the several HP3000 word and text processing software pack-

Cobol and Fortran, s 1600/6250bpi dual-density tape drive, and a 120 or 404 Mbyte disc. The print sta-78774. King Street Lane, Winnersh, Wokingham, Berks. Tel: (0734)

DG adds to its 600 lpm family of band printers feature, lets users operate the products CAD system for PCB design has colour graphics

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range.
The oew printers feature stateof-the-art technology, high-quality
printing, and a built-in disgnostic
display. Models are available for
all Data General Nova, Eclipse and commercial Systems (CS) compu-

Design features include frictionfree hammer actuators, low power consumption and a minimum of mechanical parts which permit The steel-band fount carrier

provides vertical and horizootal registration of characters. The band can be replaced easily, offering users character fount flexibility. An LED diagnostic display records the printer cycle in the event of an offline cooditioo. This

dimed to raise productivity and provide greater control over the design-to-manufacturing cycle of district or manufacturing cycle of and its trace points; inserting traces from level of and its trace points; inserting traces of the control of the Models 4363, 4364, 436 ct 4366 are designed for opening 1 Eclipse information system Models 9755, 9756, 9759 in 198 operate on the company (or in mercial Systems family of mil pany's family of PCB design of an original connect; displaying systems, the PC-800 Model 3 variable grids on-screen primits on-screeo design of printed circuit boards and incorpotate design and production tools

are design and production tools

3 designer can display, on com-All models print high quint fully-formed characters sold:

for report genetation. On such as colour graphics, Winchesbundred and thirty-two comes can be printed at 600 ipm to 100 ter drive, desigo rules checking, ranging from three to 15 independencing up to air radio acceptes. Standard pitch is to describe acters/inch borizootally, and we selectable at six or eight linear servicelly. en-screen design and component deign console with a 48 cm colour graphics display, 20 Mbyte Winschester drive and on-screen design well os N/C drill tapes and N/C. thester drive and on-screen design with oscillary and the serior automatic component inspection needs, the Model 3 con be configured with one of four high-precision Gerber photoplotters, a 107 x 152 cm co-ordinate digitiser methods and sequencer machines.

Gerber Scientific (CW), Cumberland House, Greenside Laoe, Bradford BD8 7BR.

Data General (CW), lionia records the printer cycle in the event of an offline cooditioo. This display, with a built-in self-resr 1PD. Telephone: 01-571745.



For telex users who employ conventional tape cutters, but wha wish to streamline message preparation procedures, Format Cammunications has introduced a new Videopunch system. The system is designed to bring the advantages of VDU message preparation and editing to telex users at a cost below £2,500. Should a user then the contest to fully enterprised telex at a later date.

want to convert to fully automated telex at a liner date, add-on provision in possible. Various configurations of the Furnat Videopunch are available.

Format Communications (CW), Longbridge Way, Cowley Mill Road, Uxbridge, Middlesex. Tel: (0895) 30678.

'Universal' intelligent disc drive

CII-HONEYWELL Bull has in-troduced the D145 SASI compatible intelligent disc drive. The SASI universal system interface has been accepted as a major stan-dard in today's systems.

Cll-HB claims to be the first manufacturer to offer the control let logic in the form factor of its disc drives. The D145 intelligent drive provides the user with 20 Mbytes of formatted online storage with built in back-up (10 Mbytes removable cartridge plus 10 Mbytes fixed disc). It intro-

duces a scries of intelligent drives offered by CII-HB.

The intelligent interface frees the central system from handling the details of drive code and in terface protocol. All seeks, verifidisc control and data transactions are automorically handled in microcode without CPU or bus in-

The D145 is priced of £1,860 for

CII-Honeywell Bull (CW) Kings Wick House, Sunninghill Berks. Tel: (09-10) 23491.

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Speakers It our morning

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Cash Flow; how to survive and grow up Ron Weedon. Managing Oirector, Keen Computors Ltd Questions and discussion: bridging the gop between Led by Ironk Sumner. Professor of Computing Science,

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Calcomp's 9000 Series digitiser being used in conjunction with the Calca

Calcomp expands its digitiser lines

A RANGE of digitisers, claimed to be more flexible and versatile in have a resolution of 40 line in the units is ±0.263mm and its 1: configuration and interfacing capabilities than competing units but costing up to 20% less, has been announced by Calcomp.

Designed for use in CAD, mapping, exploration and seismic analysis, the 9000 Series is an additional analysis, the 9000 Series is an additional analysis, the 9000 Series is an additional analysis and series and as an alternative to be configuration and interfacing capabilities than competing units but throughput another new probabilities than competing units but through

tiser and as an alternative to M ion to Calcomp's existing digitiser

The 9000 Series uses advanced lectromagnetic technology with a new type of digitising surface developed by Calcomp's Talos Digitisers division which allows digitising on conductive materials and is said to provide more precise data input with greater reliability.

Standard digitising accuracy of 50211. and aelectable output rates up N 240 co-ordinate points per second Calcomp Ltd (CW), Cor House, The Ring, Reacisel, Berks. RG12 IER. Tell (1944)

Eight colours on display

A NOTHER model io its ColorScan range of colour display video terminals bas been introduced by Mellordata. The new model, the ColorScan 70, is fully compatible with the Daaber video terminals, Models DG100/200 and DG6052/53 from Data General.

ColorScan 70, priced at £1,826, allows up to eight colours to be displayed aimultaneously.

Mellordata Ltd (CW), Colchester. Tel: 0206-298181

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leractive termioal market.

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UATA Design Techniques
Limited teleased in the UK an intelligent VDU aimed at the inletactive terminal models.

In the control code characters, and an 11 special graphics set is standard, Video stributes in-Single unit price will be video, underline, normal and high

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Software support for distributed processing includes a System

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X.3.23-1974), and Edit Processor.

a Loadable Character Set General

tor, and a Text Processing Utility.
Sperry Univac (CW), Centre
Point, 103 New Oxford Street,

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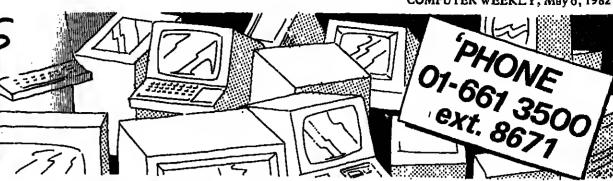
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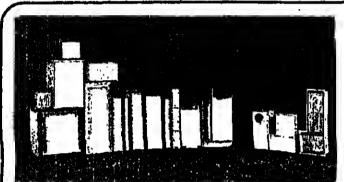
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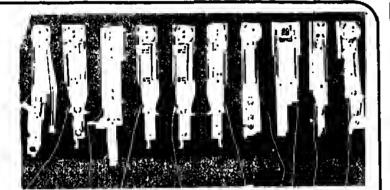
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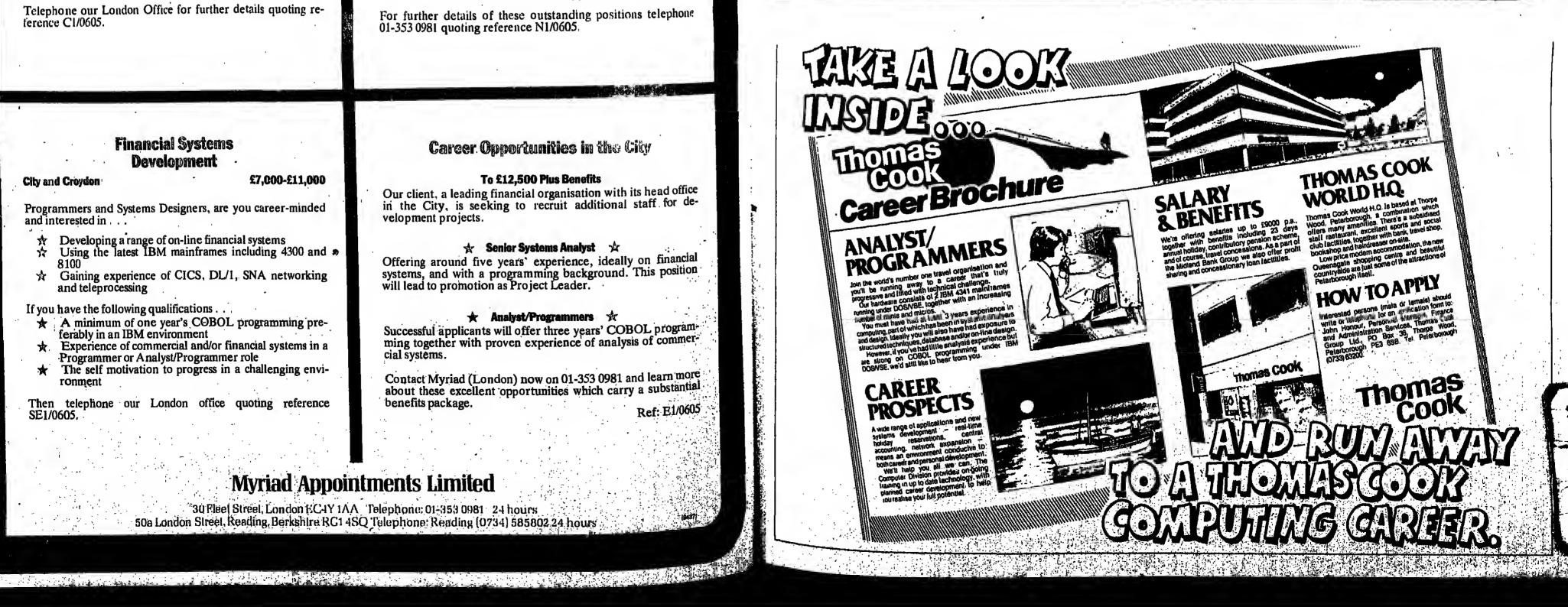
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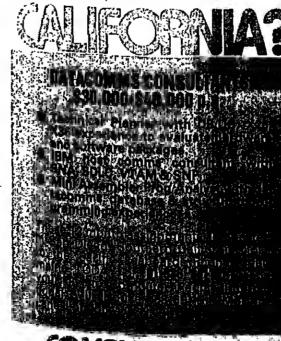
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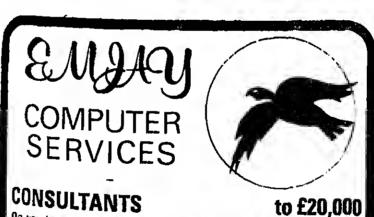
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Our clients are a large public organisation with its Head Office in Warwickshire and some 37 companies located throughout the U.K. They currently seek an experienced data processing person to take responsibility for their computer and systems development.

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The Irish Dairy Board is the cantral marketing organisation of the Irish Dairy industry end es such has overall responsibility for Deiry Exports. Irish Deiry Products ere exported to 80 countries world wide.

The Board has recently instelled en IBM 4341 computer end will be making extensive use of CICS. Therefore we require additional programming personnel who will contribute strongly in this area.

It is essential that cendidetes heve at least two years' solid Cobol progremming experience along with a proven knowledge of C.I.C.S., showing a potential leaning towards

These eppointments offer exciting and challenging opportunities for cereer minded individuals wishing to progress in a secure and modern environment. A very ettractive salary can be expected with ell the benefits associated with an organisation of this nature.

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For further details end en eppointment, pleese write to Mike Cerr in Dublin or contect Eddie Howerd in London.



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Systems Analyst Senior Programmer Dublin

AnCo (An Chomheirie Olliúna, Ireland's Industrial Training Authority, requires a Senior Programmer and a Systems Analyst to carry out deaignsted responsibilities within its Data Processing Complex. AnCO's dats processing configuration includes a 4 megsbyte VAX 11/780 end a number of ICL mini-computers used in a distributive environment. Software packages currently in use include FIN-PAC, DATATRIEVE and

The Systems Anelyst will take responsibility for design, documents tion testing and implementing computer based systems for all sections of the organisation. A minimum of three years' Data Processing experience is required on commercial systems and should include oversil responsibility for at least one major project.

The Senior Programmer position involves reaponsibility for meeting sgreed performance levels and ssaisting less experienced programming staff to schieve their targets. He/she will report directly to the Chief Programmer. Candidates should have at least 4 years' commercial programming experience with extensive use of Cobol preferably on disc based systems. Responsibility for st least one major system is

The salsry scale rises to IR £12,666 p.s. Contributory pension, sick banefit, spouses' and children's pension and group Voluntary Heelth schemes are in operation.

Write, call or telephone the Personnel Officer, AnCO, for an epplication form, or contect Eddie Howard in London. All completed epplications must be returned by May 21st, 1982.



The Industriel Training Authority P.O. Box 456 27-33 Upper Baggot Street Dublin, 4 Tel. (01) 685777, Ext. 441

Systems Programmer Dublin

STC Documation Products BV, the European menufacturing base for Storage Technology Corporation of Colorado, USA, currently manufac-luras a range of high-speed Impact Printers and Tape and Disc Drive units for use with computer systems.

As part of our recently announced major expansion program, the DP facility will shortly upgrade its hardware to an IBM 4341 configuration, operating under VM/DOS/VSE. This will provide sophisticsted control systems in an online database environment using CICS and DL/1. At present we are at an edvanced stage of implementing IBM COPICS package which will provide an interactive manufacturing control system. To achieve this we are now seeking a Systems Programmer. The successful applicant will have a number of years' relevant systems programming experience OR have a computer science degree.

Salary will be very attrective, reflecting the importance attached to this position. In addition, interview and relocation allowances will be paid whare appropriate. If you would like to become pert of the exciting and rawsrding growth and development of our company, please write or talephone for en application form to:

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or contact Eddie Howerd in London.

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To oversea this davelopment, two Project Laeders ere required with a minimum of six years' commercial deta processing expartise, having implemented at least one major project, preferebly as Project Leader.

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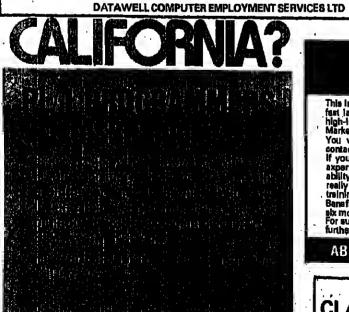
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To carry out the tests as defined by strategy and environment providing detailed feedback on test results and testing problems.

There is at least one and sometimes two positions available in each group and all posts require knowledge of an IBM environment using TSO/SPF. The type of candidate most likely to be considered will have had a Systems Software background rather than applications and if you have been involved in designing software then you may have a further advantage. Find out more by contacting me at the address below.

> Contact: Tony Staples, JAMES BAKER ASSOCIATES International Personnel Consultants, 32 Savile Row, London, W1X 1AG. Telephone: 01-439 9311,



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in order to achieve this goal a specialised group has been formed and its major mission is to define the methods to be used in designing, implementing and controlling new Software development and to define new Software tools to support those methods.

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This is a senior post involving a great deal of contact with Senior Management and programming staff.

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ment of an experienced person to play a key role in a major new project. It is essential to have a sound background in COBOL programming coupled with supervisory skills and proven design ability. Knowledge of Banking Systems and/or Honeyweil Level 6, would be a definite adventage.

For further Information pieese contect our edvising consultent Jenet Chilvers on 01-437. 3942.



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The minimum requirement is 18 months commercial experience in BASIC, SPL, FORTRAN or any other block structured language, together with a good academic background. Any knowledge of Hewlett-Packard systems and software would be advantageous but not essential as training will be given where necessary. Candidates can expect a high degree of client contact and must therefore be professional in both appearance and attitude. Some travel will be required between the Company's City office and their head office based in an easily accessible part of South Buckinghamshire.

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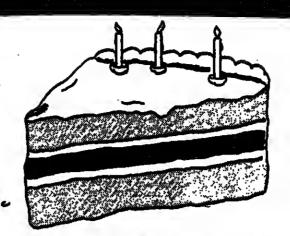
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So congratulations on two counts to a lot of hard working, talented people who've helped to make us what we are today. They're getting their share of the cake and you can too.

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A salary and benefits package belitting this size of company is offered as well as opportunities for overseas travel with some of the

If you feel that you have skills to offer and are seeking a challenge as well as a career, you can find out more by contacting me at the address below:-

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JAMES BAKER ASSOCIATES International Personnel Consultants, 32 Savile Row, London, WIX 1AG. Telephone: 01-439 9311.

Programmers

Basingstoke

£11,000

(Perm and Contract)

Our client is a rapidly expanding systems house specialising in the development and implementation of interactive systems, utilising sophisticated data base techniques.

A minimum of three years COBOL programming experience is essential plus. knowledge of data base applications. Equally Important are program design and documentation and the ability to be effective in a project team environment.

Contractors with sound COBOL and preferably knowledge of a low level language are also required for six month+ assignments. Rates negotiable.

Contact: Brian Postles

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Successful cendidetes should have a degree in Computer Science. 2 years' of ISM or UNIVAC, used modern high-level lenguage and have been involved with large Software development projects.

Ref CW 10/1

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A mejor communications company require additional German-speaking programmers, to develop new communications Software. Candidates ahould have a minimum of 2 years' Reel Time experience in this field.

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Setellite communicatione is our client's speciality. They currently wish to employ a Herdwere Engineer with a minimum of 3 years' experience in Industry. A degree background le necessary plus some involvement in Softwere Herdwere experience of TTL and ECL design on micros would be ideal.

Ref. CW10/5

ASSIFORD SOFTWARE FARMETERS

A company dedicated to Communications Systems is currently seeking engineers with a variety of the following:

- IBM/ICL PROTOCOLS DEC/RSX11/VAX
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- NETWORKS
- PROCESS CONTROL .
- **EMULATORS** Ref. CW10/6

FUSANCE ICAN SYSTEM PEROCHAMAMERIS

One of Frence's lergest Computer Services Compenies have openings for IBM Systems Programmers to work on a verlety of our client's instelletions in a Systems engineering

Knowledge of French would be helpful, though e willingness to learn French is essential. Technical experience must include e minimum of 2 years' MVS experience plus releted

CORPERED BY THE ONE OF THE SECOND OF THE SEC Our client's London-based operational Research/Scientific Systems group is currently seeking progremmers with the following expartise:

- FORTRAN
- MVS/TSO Honours Degrea Min. 2 yrs' exp. Financiel Planning SWITZERLAND SENIOR SYSTEM ENGINEER

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Peckage Systems switching from dealgn to implementation.
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— Minimum 5 years in Reel Time

- Minimum 3 years in Telecom
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- synchronised date awitching
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The successful candidates must be self-motiveted able to work on his or her own end adept to modern QA Techniques.

This is a highly reaponeible position carrying job satisfection end generous remunera-tion for the right level of experience. Ref. CW 10/12

COMMAND & CONTROL LONDON

One of the lergest internetional Software houses with their headquarters in London have a requirement for Softwere Designers with e minimum of 1 year's experience in Real Time Systems Deelgn, cendidetes should have a degree plus experience in one or more of the following:

- Defence Systema Maecot
- VAX PDP11 - INTEL 8086
- Ref. CW/11

All the above appointmente involve permanent positions end cerry a wide renge of selery and conditions dependent on location and experience. In the first instance please eend us e copy of your CV (elternetively telephone for en epplication form) so we may discuss your explication in confidence with our client on your behelf.

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A London based consultency require experienced candidates with a minimum of 4 years telecommunications experience, to work in an English epeaking project in Italy or Spein.

Succeedful candidates will be expected to become Team Leaders share felrly short period. Experience with Systam 12, CHILL, ASSEMBLER, FOR TRAN, EBM/TSO and networks would be ideal.

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Our client applies treditional engineering disciplines to Software Design and Production. Their epplications include Weepone Guidence, Satellie Communications, Methematical Modelling and Systems Simulation, Cendidatas with competible experience to the above applications will give a remerkable breadth and depth of knowledge, not just on a theorated basile but through practical experience, and close involvement in some of the most advanced Real Time Systems enywhere.

Planning on-Oktobers

Our client, a growing Computer Manufecturer, is seeking candidates to inter-fece between Merketing end Systems Design.
Cendidates should have a technical background including 2 years programming and must be able to communicate in English both written and varibal, and have a desire to become involved with tachnical writing.
Our client's business involves the latest technology including Micro Processors, Date Communications and Local Networks.

CW17/3

SON AVERAL CHOOSILEASILE LES

Market Market

Our client is ecknowledged to heve one of the world's forsmost Reserve and Development establishments in the field of Telecommunication.
 They ere currently developing a Digital Exchange for office and factory

use. They wish to recruit Softwere Personnel who like working in relatively smell projects, with e minimum of supervision and anjoy exposure to

Cendidetes should have a Degree, 2-4 years experience of Real Time Software Development preferably in Telecommunications.

siveri este l'Essimetere

HAN LANDSON HE -- BRONLY ARTHO

One of the UK's lergest Systems Consultency and Implementation organisation's offers an exceptional combination of involvement, experience and commitment in a number of specialised application stass.

They are looking for System Engineers to undertake an initial assignment in Europe working at the design stage of a Real Time project.

Candidates should have:

- A minimum of 5 years experience
 Specialised knowledge of Fire Control Systems
- Navigation or EW Systems

CW 17/5

Sares sources

With the signing of enother large militery contract, our client is urgently seeking System's Engineere to become involved in Technical Support. Ideally cendidates will have a Degree or an education from within the services. A number of candidates are required to become involved in the

- Pre & Post Selas
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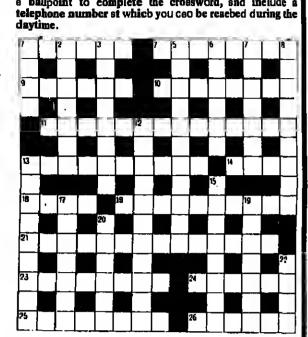
Quality of management - 8

I SALES BIT I

CROSSWORD

Prize Crossword No 28 Compiled by Alec Robins

A prize of £10 will be awarded for the first correct estry opensd. The secnad end third solutions opened will receive £5 each. Entries to Crossword Competition, Computer Weekly, Quadrant House, The Quadrant, Sutton, Surrey, SM2 5AS, by first post Friday, May 14. Please use a hallocist to complete the crossword and include a ballpoint to complete the crossword, and include a



I accept the rules and conditions of the Computer Weekly Crossword Competition.

DOWN

Nouce very big risiog, making a spleah? (4)
 Disappointing outcome of French seen in their

newspaper (2,5)
Draws into error with a

Restoring to former

position, and setting forth under control (11)

6. Shout shout the girl

bringing fruit (6)
7. Fond of good literature?

8. A tense condition, in

12. Mayor's meo on ram

13. Met s fool - upset me

15. Deduce one alternative

- dripped blood (9)

is poorer (8) Wooden stakes Dad's

An interesting incident

is written into a lyric

master precedes the so-

prizes during the month fol-lowing the competition.

5. The decision of the editor

because

poem (71

toxication? (9)

All right, I dip into rub bish (7)

page - it msy belp to

get one's owo back (6,5)

wry sad smile (8)

ACROSS t. Serah in the morning is

given one sausage (6)
4. A good sport to face the bowles and hostile missile (8)
9. Mother gets request for

figured material (6)
10. Throughout existence 1 was conscious of falling short in desire (8)

11. Below the others? The restricted (5,9) 13. A Scot, one having to live right next to a fel-low Scot? (10)

14. Fancy hose in which there's usually s sock

16. Urgent message about Party's leader giving bribes (4) 18. Still a type of debate

with nothing to vote on? 21. Ask me in, Ms - I flog sensational indigestion

potion (4,2,8) 23. Lotion makes small car return in fest time (8) 24. Is skulking inside

depressed, cast off (6) 25. Unfolds drame in a Norfolk town (8)

vereign (6)

22. A fool, by the sound of 26. Silver for spy about right (6) - thet's

RULES AND CONDITIONS

1. Bach competitor may lighed in the issue three weeks 2. The competition is open to all readers of Computer Weekly with the exception of the staff of IPC Bosiness Press lished.
4. Winners will receive their

DEIDTETS COL them or the near relatives of any on the interpretation of the such staff. such staff.

3. The solution of each puzzle will normally be pub-

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Application forms they be obtained from: The Administrative Officer (Personnel), Nepler College of Commerce and Technology, Collinton Road, Edinburgh EH10 50T. Closing date for spolication is 14 May 1982.

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your own fault! permanently open can be a laudable piece of North American democracy, but it Drucker who ohserved that overwork is the greatest ciency. Yet, like some pieces olso serves to generate un

from subordinates, visitors and all other forms of shop. Let people know that you s a reality that goes unnoriced by a large proportion of the executive population. will always make yourself It you are a manager and available, but on your terms not theirs. Just think what you could achieve if your believe that you are overworked, consider the reasons why. The chances interruptions were reduced by 50%. Use your secretary sre you will come up with a ong tist: understaffed, state effectively, stating your of the market, poor support plans and making it know from other departments, when you accept cells and frum whom. The increase in your working efficiency inadequate superiurs, sessonal peak, lack of fin-suce, product difficulties. could be quite considerable Your list will not include. if your efforts are limited to

necessary interruptions

snything as self-critical as this area alone.
Meetings? Well we all inadequote personal organiknow about them! Meetings tend to lose their usefulness overwork sre the result n at an exceptional rate after had planning related to the working day. Consider for a mument about two hours. The application of a time limit tends to inflict a higher degree of the direct cost to your emurgettey and objectivity to the stritude of participants. ployer of utilising your ser-Just like sales-calls, people tend to agree a start, but no

If the costs for your salory and commission are £20,000, the chances are finishing time. That's bad planningl that the addition of If you want to muximise overheads, expenses and company car will bring the total to roughly £24,000. That's a very convenient figure when one considers there are approximately 240 the use of your time always insist on a finishing time for all meetings. You may not achieve a prompt conclusion on every occasion, but wheat people know they have run out of time it tends to foens working days in a year.

However, many comtheir thinking. panies do not regard tenns There are other areas neration as the real cost of a sales manager. He or she is seen in terms of negative where time can be saved travelling, correspondence, sffective delegation and so revenue. When sales manon - but the effective use of agers achieve or exceed revenue target, they coar "nothing". If further permanagement time means more than increasing the efficiency of existing activities. There are other essenformance is less than ex-pected then that is the price tisl functions of the company pays.
I have heard it said that management that are likely to be overlooked because of some American companies pressure from other quarinstell digital time/cost ters. Planning, self-evaluaclocks into management

meetings and conventions which declare the cumulstion, creative thinking, and These are important aspects of management that must be given individual exposure during every working week. Witbout participants into the most efficient use of time. these the manager becomes install a time/revenue clock in the sales manager's office e stagnant automaton who is neither developing nor working to maximum potendeclaring the cumulativa tial god probably destined revenue value as each minfor a nervous breakdown, e ute passes - but I am sure

heart attack, or even both.

That's e terrible price to

uve cost to the company of the executives involved. The

intention is to motivate the

It would be interesting to

the effect would be entirely

pay for failing to realise Badly organised managers can usually be identified by their continuing need to work overtime and the air of one's real potsnual. So, next time you take a pile of work home for the panic that surrounds most of their activides. "Manage-ment disaster" is the modus heppens to mention how easy it is to get a divorce operaodi sod "hsadisss chickeo mods" the executhese days, do take time to plan your business activities they cojoy the adrenain flow of operating right up to the deadline, everyone working at high pressure, labouring ioto the early theriral Alan Williams

PUZZLE

ANSWER WHEN one looks at the first

hoursl Well, it may give the manager a buzz, but for the staff it is likely to be a pain in the neck they would rather be without. ataff it is likely to be a pain in the neck they would rather be without.

So, what is to be done?

The answer is rather more than simply an awareness of the cost of time space on the job. The real pay-off is in effective time planning and personal organisation. The typical sales manager loses most of the working day again the knowledge that the remainder of the application of the working day again the knowledge that the first two equations, it becomes that the first two equations, it becomes two equations, it becomes that the pair of factors giving 288 must have the same sum as the pair of factors only, two factor-pairs that meet this condition are 8 × 36 and 6 × 38.

This leaves us with (8 + 11 likely the pair of factors giving 288 must have the same sum as the pair of factors only, two factor-pairs that meet this condition are 8 × 26 and 6 × 38.

This leaves us with (8 + 27 most of the working day again the knowledge that the first two equations, it becomes that the first two equations, it becomes that the first two equations, it becomes that the pair of factors giving 288 must have the same sum as the pair of factors only, two factor-pairs that the first that the pair of factors giving 288 must have the same sum as the pair of factors.

The construction of the condition are 8 × 28 and 6 × 38.

This leaves us with (8 + 28 and 6 × 38.

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The condition are 18 × 28 and 6 × 38.

The condition ar

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